1 3

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
						David Dunlap Observatory					
						74" Logbook					
						Vol 79					
						Plate Nos CC28344 - 30811					
						November 1994 - February 1995					

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Date 1994 Nov 19/20 Observers Km/Smt

~~Emulsion Batches:~~ BG 39 FILTER IN
EXP. MTR.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
	CONTINUED FROM BOOK # 78										
CC 28344	COMP							FeNe clear	30	BG 39 FILTER	
45	HD40535	05h 54 18	-9° 23′	04 29 11		—			1200	3410	
46-65	FLAT x 20					2h W	+10°	Tung clear	10		
66	BIAS(4)				05 12						
67	COMP							FeNe clear	30		
68	HD77912	9h 00 12	+38° 51′	05 30 32		0h 9m W			320	4180	
69	COMP							"	30		
70	COMP							"	"		
71	HD90537	10h 22 06	+37° 13′	05 44 22		1h 0m E			223	4000	4-
72	COMP							"	30		
73	COMP							"	"		
74	HD92125	10h 33 06	+32° 30′	05 55 58		0h 58m E			295	4010	4-5
75	COMP							"	30		
76	BIAS(4)				06 04				—		

CCD Spectr. Temp.
Focus
Spectr. Temp.

CCD ~~Spectr.~~ Temp. -100.1°C Dome Temp./Hum 2.1°C/73.2% Transparency Conditions hazy, bright full moon 6

Focus 7.05

Spectr. Temp. ..... Dome Temp./Hum. ..... FANS OFF

430 0 50 1024 4 1 CCDFMT

Janson Exp.	Exp. Mtr.	Seeing	V ~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CLAMBDA	~~P.H.~~ Cl	Program	Remarks	max ADU Quality
30	36 39 FILTER				CASS CCD	600 l/mm(C) G=2622	150μ	4220 Å	8			
1200	3410		6.12	F2IV					9	Km MK STDS.	2nd COMP INADVERTENTLY WIPED AFTER TELESCOPE MOVED & CLOCK DRIVE TURNED OFF FOR FLATS	7.3K
10	"								10			13.7K – 12.5K
									1/2			
30									11			
900	4180		4.56	G7 Ib-II					12	"		10K
30									13			
"									14			
223	4000	4"-5"	4.21	G9IIIab					15	"		10K
30									16			
"									19			
295	4010	4"-5"	4.71	G2IIa					20	"	some emission ~ Hδ?	9.8K
30									21			
–									1/2			

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Date 1994 Nov 19/20 Observers Km / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC28377	COMP							FeNe clear	30
78	HD 98 262	11^h 13 06	$+33°$ 38′	06 10 59		1^h 26^m E			95
79	COMP							"	30
80	COMP							"	"
81	HD88009	10^h 03 42	$+19°$ 01′	06 22 39		0^h 3^m E			230
82	COMP							"	"
83/84	COMP / STELLAR HARTMANN					0^h	$+42°$	"	20/
85	BIAS (4)				06 49				-

Spectr. Temp. -100.2°C Dome Temp./Hum. 1.5°C / 74.7% Transparency Conditions fine 8

Focus 7.05

Spectr. Temp. ..... Dome Temp./Hum. 1.1°C / 76.3% @ FOCUS TEST FANS OFF

430 0 50 1024 4 1 CCDFMT

Exp. Mtr. FILTER	Seeing	✓ ~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ LAMBDA	~~P.H.~~ Ci	Program	Remarks	max ADU Quality
				GASS CCD	600 l/mm (C) G=2622	150μ	4220Å	22			
4000		3.48	K3III BaO.3					23	Km MK STDS.		8K
								24			
								25			
330		7.89	G8IIIa CN,					26	"	CCD T STARTING TO RISE NOW. T = -90°C TRY IT AGAIN	800
								27			
								3/4	FOCUS TEST	TOP UP OF LN_2 BEFORE HAND – TUBE THAWING	
								1/2			

Backed up to Perseus & WORM

#L 9 Mon / Tues

Date 1994 Nov. 21/22 Observers [Bln] Ta / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seei
CC283 86/87	Comp / Stellar HARTMAN positions					00 00	+40°	FeAr Chart	40/70		
88	BIAS (4)										
89	Comp							FeAr Chart	60s		
90	HD 37017	05 30 25	-04 34	03 22 23		~1h 30? W					4"
91	Comp							FeAr Chart	60s		
92	Comp							"	"		
93	HD 21364	03 21 42	+09 23 00	03 46 00		4h 12m W			360	20000 is	5
94	Comp							FeAr Chart	60		
95	BIAS (4)										
96	Comp							FeAr Chart	60		
97	HD 42111	06 03 45	+02 30 56	04 01 47		1h 49m W			500	5150	5
98	COMP							"	60		
99	Comp							FeAr Chart	60		
400	HD 37017	05 30 25	-4 34	04 17 30		2h 34m W			282	1600	5
401	Comp							FeAr Chart	60		

CCD
Spectr. Temp. ...
Focus ... 6.90
Spectr. Temp. ...

~~Spectr.~~ CCD Temp. -100°C Dome Temp./Hum. +5.3°C 57.7% Transparency Conditions Clearing very gust SSW wind

Focus 6.90

Spectr. Temp. Dome Temp./Hum. C LAMBDA 422 0 50 1024 4 1 CCDFMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	MAX ADU Quality
				CASS CCD	1800 l/mm G4558	306μ	4475Å	3/4	focus Test	Temperature dropping fast.	
								1/2			
								5c		MAX 2.6 K	
	4"7"	6.56	B2V					6c	Bln pgm		
								7			
								8			
20 000 ish	5"	3.66	B8p					9	Bln pgm	S/N > 300:1	7800
								10			
								1/2			
								11			
5150	5"	5.80	A3Vn					12	Wide A-Shell	S/N 200/1	2900
								13			
								5			
1600	5"	6.56	B2V					6	Bln pgm	S/N ~140:1	
								5			

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Date 1994 Nov. 21/22 Observers [Bla/Wade] Tu./Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Sec
CC28402-10	FLAT x 9					0h	-20°	Tung clear	13		
11/12	COMP / STELLAR	HARTMANN				0 0	+28 28	FeAr clear	40/70	4.2	
13	BIAS(4)										

Spectr. Temp.
Focus
Spectr. Temp

Spectr. Temp. ..... Dome Temp./Hum. 3.9°C/55.5% Transparency Conditions ... thick cloud bank rolled over ... 12

Focus ..... 6.90 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

parison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	max ADO Quality
13					CASS CCD	1800 l/mm G=4558	300μm	4475Å	14 Ci			14.0 K → 12.8K
40/70	4.2°C					"		"	3/4	focus.	Temp CSE = +3°C or T1C = 3	
									1/2			

Backed up to Perseus & WORM

p. 113 [Tue/Wed]

Date 1994 Nov. 22/23 Observers [Bln/Wde] Tn/Smt

~~Emulsion Batches~~: BG.39 FILTER USED IN EXPOSURE METER

CSS 386 Time Reset

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC28414/15	Comp / Stellar Hartmann					00 00	+40°	FeAr clear	40/70
16	BIAS(4)				17 50				
17	COMP							"	60
18	HD192518	20 10 08	+28 23 30	18 05 30		1h 46 W			310
19	COMP							"	60
20	COMP							"	"
21	HD210459	22 05 33	32 41 15	18 17 39		0h 0m			140
22	COMP							"	60
23	COMP							"	"
24	HD222368	23 34 48	+05 05	18 27 27		1h 19m E			203
25	COMP							FeAr clear	60
26	BIAS(4)				18 42				
CG4060 1/60	HD 218525	23 0335	+44 01	18 45		00 33 E		4x	67ms
60 3/60	"							2x	133ms
27	COMP							FeAr clear	60

CCD ~~Spectr~~. Temp. -101.1°C Dome Temp./Hum. 0.8°C / 45.3% Transparency Conditions partly cloudy

Focus 6.9.3

FANS ON

Spectr. Temp. Dome Temp./Hum.

422 0 50 1024 4 1 CCDFMT

Comparison Exp.	Exp. Mtr. FILTER	Seeing	~~Dig.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CLAMBDA	~~P.H.~~ CI	Program	Remarks	Quality MAX ADU
40/70	+1.6°	Set	6.93		CASS CCD	1800 l/mm G=4558	30μ	4475Å	3/4	Focus		
									1/2			
60									5		SE FAN TURNED OFF	
310	6550		5.18	A7IVn					6	Wide A-shell.	S/N ~ 220:1	3900
60									7			
"									8			
140	6400		4.29	F5III					9	Wide A-shell	S/N ~ 210:1	3900
60									10			
"									11			
203	9500	3"	4.13	F7V					12	Std. Vel.		4.4K
60									13			
									1/2			
67ms	MAX 175, 156, 166, 168		6.43	A0	CCD GUIDE CAMERA				–	Seeing	Medium NW wind	
133									–	test	Dome west	
60									14			

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Date 1994 Nov. 22/23. Observers [Bln./Wade] Tu./Sm.t.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC28428	HD21364	03 21 42	+09 23	19 00 17		4h 34m E			260
29	COMP							Feath clear	60
30	HD21364	"	"	19 07 59		4h 13m E			940
31	COMP							"	60
32–40	FLATS x 9					0 0	−12°	Turq clear	13s
41	BIAS(4)								
42	BIAS(4)			01 36 11					
43/44	Comp / Stellar	HARTMAN				0 0	+29	Feath cloud	40/70
45	COMP							"	60
46	HD37017	05 30 25	−04 34	01 50 53		0h 21m W			900
47	COMP							"	60
48	BIAS(4)				02 09 53				

Spectr. Temp. -101.1°C Dome Temp./Hum. 0.4°C/48.6% Transparency Conditions mostly cloudy cleared but STRONG NE FAN ON winds started to carry snow. 16

Focus 6.93

Spectr. Temp. ..... Dome Temp./Hum. .....

Harison Exp.	Exp. Mtr. FILTER	Seeing	~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ LAMBDA	~~P.H.~~ C1	Program	Remarks	Quality
260	2400		3.66	B8p	CASS CCD	1800 l/mm G=4558	306μ	4475Å	15	Bln	mostly ~~some thin~~ cloud.	
60									16			
940	17030	4"	"	"					17	Bln	cloudy for 1st minute & for a bit in middle	10K
60									18			1
13s									19.		CLOUDED IN.	14.2K → ~~13K~~
									1/2		CLOSED UP.	13.0K
									1/2		FANS OFF CCDT = -101.9°C	
4:1/10	T = +1.1°C		set 6.93						3/4	Focus		
60									5			
900	5400		6.56	B2V					6	Bln	HIGH WINDS	2900
60									7			
									1/2		SAME SNOW IN AIR.	

Backed up to Perseus & Worm

[7] pg#1 Wed / Thurs

Date 1994 Nov 23/24 Observers [Rn] Tn / Sant

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC 28449/50	Comp / Stellar Hartman				1736	00 11 W	+29 13	Feathr Clear	60/60
51	BIAS(4)			17 40					
52	Comp							"	60sec
53	HD173297	18 39 20	-20 45	17 52 40		3h 27m W			1602
54	COMP							"	60
55	~~Comp~~ BIAS(4)			≈ 18 40					
56	Comp for HD187691	19 46 12	+10 10					Feathr Clear	60s
57	HD187691	19 46 12	+10 10	18 28 17		2 38 W			400
58	Comp							Feathr Clear	60s
59	Comp							"	"
60	HD187691	19 46 12	+10 10	18 48 32		2 57 W			336
61	Comp							Feathr Clear	60s
62	COMP							"	60
63	HD180583	19 12 00	+27 45	19 02 43		3 54 W			818
64	COMP							"	60

Spectr. Temp. -101.4°C Dome Temp./Hum. -2.6°C 46.8% Transparency Conditions Fine - some cloud 8

Focus 6.90

Spectr. Temp. Dome Temp./Hum.

* Note 415 definitely has flat image centered in window.

* 415 0 50 1024 4 1 CCDFMT

Exp. Mtr. FILTER	Seeing	~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CLAMPS	~~P.H.~~ Ci	Program	Remarks	Quality
				CASSCCD	1800 l/mm G=5910	306	6406Å	3/4	focus	FANS OFF	
								1/2		HR8143 in Sci & normalization	
								6			
1580		7.48	~60Ib					7	Rm	Telescope E side	2.2K
								8.			
								~~9~~ 1/2			
								~~9~~ Ci		CCD T = -100.3°C	
5,200	3"-4"	5.11	F8V					10 Ci	Std vel	Δα -00 00 16 Δδ -00 00 06 Telescope East side	10.8
								11 Ci			
								12 Ci			
5000	3"-4"	5.11	F8V					13 Ci	std vel	Δα -00 00 08 Δδ -00 01 33 Telescope West side	8350
								14			
								15			
5000	3"	6.19	F6I - II6					16	Rm V473 Lyr		8200
								17			

19 pg#2

Date 1994 Nov 23/24 Observers [Rm] Tn/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC28465	BIAS(4)				19 23				
66	COMP							Fe Ar clear	60
*edit 67	HD331970	20 08 27	+32 34 16	19 27 13		3 39 W			1800
68	COMP							"	60
*edit 69	HD331970	20 08 27	+32 34 16	20 00 58		4 12 W			1803
70	COMP							"	60
71	BIAS(4)								
72	Comp							Fe Ar Clear	60
73	HD203156	21 15 23	+37 49 00	20 52 06		3 38 W			672
74	Comp							Fe Ar Clear	60
75	Comp							"	"
76	HD214975	22 36 55	+56 18 24	21 15 55		3 10 W			2020
77	COMP							"	60
78	HD214975			21 53 11		3 36 W			1800
79	COMP							"	60
80	BIAS(4)								

Spectr. Temp. ..... Dome Temp./Hum. -4.8°C / 50.6% Transparency Conditions ..fine.. but..hazy..... 20

Focus .....6.90.....

Spectr. Temp. ..... Dome Temp./Hum. -5.8°C / 56.2% FANS OFF

Comparison Exp.	Exp. Mtr. FILTER	Seeing	✓ ~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CLAMBDA.	P.H.	Program	Remarks	Quality
					CASS CCD	1800 l/mm G-5910	30 μm	6400 Å	1/2			
60									18			
1800	672	3"-4"	9.1 -9.8	F8-G2Ib					19	Rm MW Cyg		1100
60									20			
1803	673	3"-4"	9.1 -9.8	F8-G2Ib					21 start ~~21~~ 19 "alert"			
60									22			
									1/2		Dome T = -5.6°C	
60									23			
672	500 x	3"	5.8 -5.9	F2					24	Rm V1334 Cyg		7.5K
60									25			
									25			
2020	~1600		8.40	~60Ib					26	Rm Z Lac		2.3K
60									27			
1800	1335	4"	8.40	~60Ib					26	Rm Z Lac		1.0K
60									27			
									1/2			

2 pg#3

Date 1994 Nov 23/24 Observers [Rm] T. / S.mt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC 284 84/89	FLATS x 9					03 45W	+56°	Tung Ap=1/4	60s.
90	Comp							FeAr Clear	60
91	VY Per	02 20 19	+58 28 04	22 46 47		00 51W			2256
92	Comp							FeAr clear	60s
93	VY Per	02 20 19	+58 28 04	23 27 45		01 31 W			2190
94	Comp							FeAr Clear	60
95	BIAS(4)			00 08					
96	Comp							FeAr Clear	60
97	HD 25361	03 56 41	+58 23 00	00 12 54		00 33 W			1833
98	Comp							FeAr Clear	60
CG 40607-610	HD 29587	04 34 30	+41 57					4x	.067
11/12	"							2x	.133
CC 284 99	BIAS(4)				00 56				
CC 285 00	COMP							FeAr Clear	60
01	HD 29587	04 34 30	+41 51	01 01 18		0h 39 W			1461

CCD Spectr. Temp. —100.3 °C Dome Temp./Hum. ..... Transparency Conditions Sl. hazy, some cloud 22

Focus 6.90

Spectr. Temp. ..... Dome Temp./Hum. .....

MAX ADU

Exp. Mtr. FILTER	Seeing	Avg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	~~5"~~			CASS CCD	1800 l/mm G=5910	306μ	6400Å	28			13.2
								29			
300	* 3"-5"	10.8 -11.66	F5 -F9					30	Rm pgm	*seeing worsening some cloud two [S/N 70/1]	
								29			
340	3"	10.8 -11.66	F5 -F9					30	Rm pgm.	cloud at end	
								15			
								1/2			
								17			
3200	3"-4"	7.30 -8.07	F6Ib -G2Ib					19	Rm pgm	some cloud S/N > 250/1	
								20			
201, 170, 176, 189, 158, 211		7.29	dG2					—	SEEING TEST	Dome W, no wind, clear, 77% cat, -6.1°C, 57.4%, 306μ slit (above)	
								—	"	but clouds on their way.	
								1/2			
								20			
3450		7.29	dG2					21	RV Std.	through cloud @	6.96

23 pg #4

Date 1994 Nov 23/24 Observers [illegible] Tn / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
~~22~~ 28502	COMP							Fe Ar clear	60
503	COMP							"	"
504	HD 30282	04 41 05	36 32 36	01 35 21		01 09 W			1597
505	COMP							"	60
506	BIAS(4)				02 10				
507	COMP							Fe Ar clear	60
508	HD 44990	06 19 48	+07° 08	02 11 55		0h 10m E			400
509	COMP							Fe Ar Clear	60
510	COMP							"	"
11	HD 224 ~~64~~	03 31 48	+00 05 00	02 25 43		2 46 W			139
12	Comp							Fe Ar Clear	60
13	Comp							"	"
14	HD 87901	10 03 03	+12 27 00	02 40 08		2 33 E			30
15	Comp							Fe Ar Clear	60
16	BIAS(4)			02 53					

Spectr. Temp. ..... Dome Temp./Hum. -6.4°C/59.0% Transparency Conditions clear again 24

Focus 6.9

Spectr. Temp. ..... Dome Temp./Hum. -6.7°C/59%

Exp. Mtr. (CG, SKY FILTER)	Seeing	Pt. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ (CLAMBDA)	~~P.H.~~ (C)	Program	Remarks	Quality (MAX ADU)
				CASS CCD	1800 l/mm G-5910	30μ	6400 Å	22			
								22			
4200	3"	7.9 -8.8	F6 -G1					23	AW Per Rm	pgm	7.8K
								25			
								1/2			
								25			
5070		B= 6.5-8.0	F7Iab -K1Iab					26	Rm T Mon		10K
								27			
								28			
5200		V 4.28	F9IV-V					29	Std vel		9.4K
								31			
								31			
7000		V 1.36	B7V					7c	Telluric Std	Air mass 1.078	13K
								8			
								1/2			

ZS pg#5

Date 1994 Nov 23/24 Observers [Rm/Wde] Smt/Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC28517	Comp							FeAr Clear	60s
18	HD65583	075418	29 31 00	025458		0055E			938
19	Comp						"	FeAr Clear	60s
20/21	Comp/Stellar	HARTMAN				0050E	"	"	60/60
CG406 13-16	HD65583	075418	29 31 00	~0325		~0040E	"	4x	67ms
GG40617/18	"						"	2x	133ms
CC28522/23	Comp/Stellar					0035E	"	FeAr Clear	40/70
24	Comp							FeAr Clear	60
25	HD65583	075418	29 31 00	033501		0 10 E			1200
26	Comp							FeAr Clear	60
27	BIAS(4)								—
28	COMP							"	60
29	HD42111	06 03 45	+02 30 56	04 10 52		W			1190
30	COMP							FeAr Clear	60
31-39	FLAT x9					2 30W	+2 30	Ring Clear	13
40	BIAS								

Spectr. Temp. ..... Dome Temp./Hum. -6.5°C 59% Transparency Conditions ..mostly clear..... 26

Focus ....6.9 ..... 7.00 for 4558 tilt increasing cloud

Spectr. Temp. ..... Dome Temp./Hum. ..... (CCDFMT for 6400Å 415 0 50 1024 41)

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
OG560 Filter				CASS CCD	1800/m G=5416	306μ	6400Å	9			
4000	3"4μ	7.00	dG7					10	Std vel		7-7
								11			
								3/4	focus Test		
180, 175, 190, 181 236, 249		7.00	dG7		Above	306μ	slit		seeing test	No wind, no fans	
									" "	Dome facing W	
-6.3	Set	7.00			1800/m G=4556	306μ	4475Å		CCDFMT	422 0 50 1024 4 1	
BG 39 FILTER											
~4800	3"	7.00	dG7					10	Std vel		2K
								11			
								1/2			
~6200		5.73	A3Vn					13	A shell pgm	Half cloudy	
								9.			13K → 12.1K
								1			

27 BHC

Date 1994 Nov 3/24 Observers [Wde] Tn / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC 28541	BIAS(4)								
42/43	Comp/stellar	HARTMAN				00 01W	+37 06	FeAr Clear	40/70
44	BIAS(4)								
45	Comp							FeAr Clear	60s
46	HD77190	08 55 51	+28 17 48	04 57 57		00 07W			90
47	Comp							FeAr Clear	60s
48	COMP							"	"
49	HD88195	10 05 09	-01° 55 01	05 24 31		0 32 E			1071
50	Comp							FeAr Clear	60s
51	BIAS(4)				05 48				

Spectr. Temp. ..... Dome Temp./Hum. -6.3°C 60% Transparency Conditions ..... Cloudy now 88 clearing.

Focus ... 700 .....

Spectr. Temp. ..... Dome Temp./Hum. -5.82 / 59.6% @ close 422 6 50 1024 4 (

Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
						1800 G=4558	30μ	447	1/2			
40/70	-6.3°C	SET 700							3/4	focus		
									1/2			
66									17			
90	6760	3"	V 6.07	A8Vn					18	wide Asdell pgm		.4K
66									19			
1									22			
107	2115		5.91	A1V					23	wide Asdell	Half cloudy S/N ≥100:1	~1.2K continuum
66									24			
									1/2			
		Backed up to Perseus & WORM										

29
Pg #1 Fri/Sat

Date 1994 Nov 25/26 Observers Mki / Ta

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC28557/53	Comp / Stellar Hartman					00 04W	43 35	FeAr Clear	60 60
54	BIAS(4)			17 57					
55	Comp							FeAr Clear	60s
56	HD 213998	22 30 13	-00 37 59	18 08 06		00 24 E			104
57	Comp							FeAr Clear	60s
58	Comp							"	"
59	HD 8779	01 26 26	-00 55 00	18 20 27		02 58 E			393
60	Comp							FeAr Clear	60s
61	~~BIAS(4)~~ Comp							"	"
62	HD 9138	01 24 54	+05 38 00	18 36 01		02 51 E			109
63	Comp							FeAr Clear	60s
64	BIAS(4)								
65	Comp	~~03 44 43~~	~~+16 57 06~~					FeAr Clear	60s
66	V471 Tau	03 44 43	+16 57 06	18 48 38		4 45E			910
67	V471 TAU ~~Comp~~	"	"	19 04 11					900
68	Comp							FeAr Clear	60

CCD Spectr. Temp. −100°C Dome Temp./Hum. +29°C 58% Transparency Conditions Fine 30

Focus 6.84

Spectr. Temp. Dome Temp./Hum. +1.8°C 55.2% 415 6 50 1024 4 1

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
OG 560 Filter				CASSCCD	1800/4/mm	30μ	6563				
								5			
4000		4.02	B9 IV-V n					7	Telluric Std		8.9K
								8			
								8			
2900	4"	6.41	gK0					9	Std vel		
								10			
								11			
4000		4.84	K4 III					12	Std vel		9.4K
								13			
								1/2			
								14			
292	5"8	9.4 −9.7	K0 V + wd					15	V471 Tau	2.53 Air mass (S/N 75/1)	
297		"	"					16			
								17			

pg #3
31

Date 1994 Nov 25/26 Observers MKi / JTn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC28569	V471 Tau	03 44 43	+16 57 06	19 22 41		04 10E			953
70	"	"	"	19 36 58		03 55E			
71	Comp							Fe/Ar Clear	60s
72	BIAS(4)							~~Tung Ap 1/4~~	
73	FLAT					3 51E		Tung Ap 1/4	6s
74	V471 Tau	03 44 43	+16 57 06	19 59 29		3 34 30E			900
75	"			20 14 44		3 19E			
76	Comp							Fe/Ar Clear	60s
77	V471 Tau	03 44 43	+16 57 06	20 30 42		3 01E			916
78	"			20 48 18		2 48E			728
79	Comp							Fe/Ar Clear	60s
80	BIAS(4)								
81 → 86	FLATS x 6					2 40E	+17 13	Tung Ap 1/4	6s
87	DARK		Lights off	21 35 44					
88	BIAS(4)			22 48					

Spectr. Temp.
Focus 6.8
Spectr. Temp.
06 56

Exp Mtr	Sec
711	6
338	5
340	
377	
300	

Spectr. Temp. ..... Dome Temp./Hum. +1.8°C 55.2% Transparency Conditions Fine - some cloud & Haze 32

Focus 6.84 Then SNOW

Spectr. Temp. ..... Dome Temp./Hum. +1.1°C 69.3% H medium → strong SW wind MAX ADA

06560

Exp. Mtr.	Seeing	Pt. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
311	6"	9.4 - 9.71	KOV + wd	CASSCCD	1800 l/mm G-6035	306μ	6563Å	18	V471 Tau pgm		
338	5"							19			
								20			
								1/2			
								21			137K
340								22		S/N = 90/1	
								23			
								24			
377								25		cloud at end.	
300								26		more cloud.	
								27			
								1/2c			
								28c			133K
								29			
								1/2			

33
Pg #2

Date 1.9.94. Nov 25/26.. Observers . MKi. / T.G.....

Emulsion Batches:
.....
.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC28589	Comp							FeAr Clear	60s
90	V 471 Tau	03 44 43	+16 57 06	22 57 47		00 44 E			394
91	Comp							FeAr Clear	60s
92/93	Comp / Stellar	HARTMAN positions				00 40 E	+18°	"	60/60
	Nov 28/29/94			00 50					
CC287 54/55	Comp / Stellar			1st ORDER	no filter	0 0	+30°	FeAr Clear	50/85
56	FLAT				"	"	"	TUNG Clear	4s
57/58	Comp / Stellar				"	"	"	FeAr Clear	50/85
59/60	Comp / Stellar	HARTMAN			OG 560 filter	"	"	FeNe Ap 1/2	9/13
61	FLAT				"		Ap = 1/4	TUNG	3sec
62/63	Comp / Stellar	HARTMAN			"			FeNe Ap 1/2	9/14

Spectr. Temp. ..... Dome Temp./Hum. 00.3°C ... 70.2% H Transparency Conditions ..Part. cloudy..... 34

Focus ....6.84.....

Spectr. Temp. ..... Dome Temp./Hum. ..... Then snow again.

Comparison Exp.	Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
60s	OG560 Filter				CASS CCD	1800 l/mm G=6035	306u	6563Å	8c			
394	160	3"	9.4 -9.7	150 V + wd					9c	V471 Tau pgm	cloud again	
60s									10c			
60/60	+00.2°C	Set 6.84							3/4	focus test	Righton @ Row #300	
	All To work, OTHER SIDE Formatted 94-11B → Perseus too.											
5/85	T=+3.4°C	7.00 set		(stellar ≈ .5 pixel Red)		1200 l/mm. G=3770	306u	4879Å	3/4	focus Test	for Shift/set scale	
45						"		"	5c	FLAT	Grating Shift/set test.	
50/85	T=+3.4	6.60 set		stellar ≈ 2.5 pixel Blue		"		"	6/7	focus test	CCD FMT = 415 0 50 1024	4 1
9/13	T=+3.4°C	6.90		stellar ≈ 3 pixel Red		1200 l/mm G=5520	306u	8760Å	8/9	" "	370 0 50 1024 4 1 CCD Fmt	
3sec						"	"	"	10		max 8.2K ADU	
9/14	T=+3 °C	6.60		stellar 2.0 pixel Blue		"	"	"	11/12			

35 pg#1 Sat / Sun

Date 1994 Nov. 26/27 Observers K.m. / T.G.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp	Exp. Mtr.	Seeing
cc285 94/95	Comp / Stellar	Hunt	man			00 42W	+58 43	FeNe clear	20/40	8639	
99	B(AS(4) note, done after cc28598			18 0325							
96	comp							FeNe clear	30s		
97	HD 201091	21 02 25	+38 15 27	17 5428					396	5100	
98	Comp							FeNe clear	30		
cc28600	Comp							"	"		
01	HD 197345	20 38 01	+44 55 22	18 08 58		+1 33 W			15	5500	
02	"			18 10 00					17	6000	
03	comp							FeNe clear	30		
04	Comp.							"	"		
05	HD 197989	20 42 10	+33 35 44	18 17 35					44	6000	
06	"	"	"	18 19 26					42		
07	comp							FeNe clear	30		
08	Comp							"	"		
09	HD 206165	21 35 14	+61 37 51	18 27 20		00 58W			249	5700	

CCD Spectr. Temp. ...
X Focus ... 7.03
Spectr. Temp. ...

CCD Spectr. Temp. −100.3°C ..... Dome Temp./Hum. −2.0°C 63.6% Transparency Conditions ..Fine..... 36

Focus ...7.03.... [Noted to be 7.13 nov 29]

Spectr. Temp. ..... Dome Temp./Hum. −3.5°C 64.4%

CCD FINT

*415 0 50 1024 41 MAX

Comparison Filter Exp.	Exp. Mtr.	Seeing	Pl. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20/40	BG39	−20°C for Test Temp dropping fast			CASS CCD	600 l/mm G-2622	306μ	4200Å	3/4	Focus test	*Note This grating, when firmly mounted, projects spectrum centered in window with column origin of 415	
30s									5			
39/6	5,100		5.24	K5V				4200Å	6	MK standard	Otherwise, a much larger column origin	9K
30									7			
4									8		Blue comp line	10K
15	5500		1.25	A2Ia					9		Both fast guided in Decs HrL	14K
17	6000		"	"					10			13K
30									11			
4									11			
44	6000		2.46	K0III					12			10K
42									12			
30									13			
4									13			
249	5750	3"4"	4.73	B2I					14			MAX 12K
									15			

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SAT / SUN

Date 1994 Nov 26/27 Observers Kim / Tey

Emulsion Batches:

CCD Spectr. Temp.

Focus x 7.0

Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Seec
CC28610	HD206165	21 35 14	+61 37 51	18 32 18					238	0639	
11	Comp							FeNe Clean	60s		
12	BIAS(4)			18 38							
13	comp							FeNe	36		
14	HD216956	22 52 08 ~~21 40 27~~	-30 09 08	18 46 38		-00 04 E			27	5600	
15	"	"	"	18 48 00		-00 03 E			27	5500	
16	comp							FeNe	30		
17	comp										
18	HD 204867	21 26 18	-06 00 40	18 56 15		+01 31 W			64	5300	
19	~~comp~~ "	"	"						69		
20	COMP							FeNe Clean			
21	COMP										
22	HD 206859	21 39 47	16 53 28	18 04 21		+01 28 W			213	5300	
23	"	"	"	18 08 31		+01 33 W			231	5600	
24	Comp							FeNe Clean	30s		

CCD
Spectr. Temp. −100.3°C Dome Temp./Hum. ..... Transparency Conditions .... Fair 38

Focus 7.03 [Noted to be 7.13 Nov 29]

Spectr. Temp. ..... Dome Temp./Hum. −4.0°C 66% H C LAMBDA

CCDFMT 415 0 50 1024 4 1

Comparison Filter	Comparison Exp.	Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	238	BG39 Filter		4.73	B2I	C455 CCD	600 G=2622	306	420 nm	15.	MK std		12.6K
	69									16c			
										1.12			
	30									17			
	27	5600		1.16	A3V					18			13.2K
	27	5500								19			12.0K
	30									20		Comp	13K
										20			13.2K
	64	5300		2.91	G0Ib					21			10.0K
	69									22			
										23			
										23			13.3K
	25	5300		4.34	G5Ib					24			8.4K
	21	5600								24			8.0K
	30												

39 pg #3

Date 1994 Nov. 26/27 Observers Km./Tu

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC28625-44	~~comp~~ FLATS x20					02 00 W	58° 47	Clear FeNe	30s
					CC28645	Comp			
46	HD 206936	21 40 27	58 19 17	19 49 41		~~+02~~ 10 W			360
47	HD 206936	21 40 27	+58 19 17	19 49 41					600
48	Comp							FeNe Clear	30s
49	BIAS 4			20 02 38					
50	Comp								
51	HD 218329	23h 1.9m	+8° 52'	20 27 56		+01 36 W			600
52	~~comp~~ Comp	" "	" "	" "				FeNe Clear	30
53	Comp							"	30
54	HD 219215	23h 9.1m	-06° 35'	20 50 35		01 50 W			451
55	"	"	"	20 58 35		02 00 W			556
56	Comp							FeNe Clear	30
57	BIAS (4)			21 10					
58	Comp							FeNe Clear	30s
59	HD 219734	23 13 06	+48 28	21 16 58		2 16 W			624
	~~CC~~							~~FeNe Clear~~	~~30~~

Spectr. Temp.
Focus 70
Spectr. Temp

Spectr. Temp. ..... Dome Temp./Hum. -39°C 66% Transparency Conditions ..some cloud..... 40

Focus ....7.03.....

Spectr. Temp. ..... Dome Temp./Hum. -48°C 67.8%H CCDFMT 415 0 50 1024 4 1 MAX

Comparison Exp.	Exp. Mtr.	Seeing	Rtg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
30s	BG39 Filter					600 l/mm G 26 22	306μ	4200Å	26c 27c		FLAT MAX	13.5K
360	13200		4.08 ~~5.29~~	M2Ia ~~K5V~~					28c			7.3K
30/600	22500		"	"					28c			12.9K
30									28c			
									1/2c			
									5c			
600	10500 ~~16000~~		4.52	M1IIab					5c		~~SATURATION~~ MAX 14.6K ~ ~~16.3K~~	
30									6c			
30									6c			
451	9,400		4.22	M1.5III					7c		S/N = 170/1 @ 4200Å	12K
558	9,100	2"-3"							7c			9.5K
30									8			13.8K
									1/2		CCDT = -100.5°C	
303									11			12.7K
624	10,600	2"-3"	B 6.52 V 4.85	M2III					12			14.4

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Date 1994 Nov 26/27 Observers K.m. / J.T.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC28660	HD 219734	23 13 06	+48 28	21 28 15		2 31 W			910
61	Comp							FeNe Clear	30s
62	Comp							"	"
63	HD 223173	23 42 06	+56 54 00	21 50 33		2 31 W			1280
64	comp							FeNe Clear	30
65	bias 4			22 15					
CG40 620 – 623	HD 13013	02 02 18	+43 59 07	≈22 20		00 18 W	+44 25	4x	67ms
624 625	"							2x	133ms
CC28666	Comp							FeNe Clear	
67	HD 10761	01 40 06	+8 39	22 34 21		00 58 W			173
68	"	"	"	22 38 04		01 01 W			180
69	comp								30
70	comp								30
71	HD 14469	02h 15.1m	+56° 9'	22 48 50		01 07 W			2000
72	Comp								
73	BIAS (4)			23 24					

Spectr. Temp.
Focus 7
CCD Spectr. Temp.

Exp. Mtr	Sec
910	2
3754	2
5200	
5500	
1773	2

Spectr. Temp. ..... Dome Temp./Hum. -4.7°C 68% Transparency Conditions increasing haze / cloud 42

Focus 7.03

~~Spectr~~ CCD Temp. -100.5°C Dome Temp./Hum. -5.2°C 67.6%H

C Lambda

MAX ADU

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
9,100	2"	B 6.52	M2 III		600 l/mm G-2622	306a	4200Å	14 ce			12.5
								13			
								13			12.7K
3754	2"	B 7.16	K3 II b					15			6.2K
								15			
								1/2			
	2"-3"	V 6.40	G8 III		H Blue	306a	Slit		Seeing	Dome West, Light NW wind only NE FAN on now.	
								16 ci			
5200		B 5.22	G8 III					18 ci			max 10K
5500								19 ci			11K
								20 ci			
								23 ci			
1773	2"	B 2.76	M3-M4 Iab					21 ci		Part Cloudy	1.2K
								23 ci			
								112			

43 PHS

Date 1994 Nov 26/27 Observers K.m./T.G.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc 28 74	comp							FeNe Clear	30
75	HD 47839	06h 35.5m	+09° 59'	23 32 20		2 58 E			274
76	"	"	"	23 38 13					348
77	comp							FeNe Clear	30
78	comp							"	30
79	HD ~~46150~~ 46223	06h 27m ~~26 36~~	+04° 53' ~~+5 00~~	00 00 39 ~~0 23 50 19~~		01 59 E			1570
80	comp								30
81	bias 4.			00 30					
82	comp							FeNe Clear	30
83	HD 70272	08h 15.9m	+43° 31'	00 43 19		03 16 E			922
84	"	"	"	00 59 37		03 08 E		"	501
85	comp								
86	comp								
87	HD 82210	09h 25.6m	+70° 16'	01 15 03		04 07 E			315
88	~~comp~~ "	"	"	01 26 01					200
89	comp								

Spectr. Temp
Focus 7.
Spectr. Temp.

Exp. Mtr	Sec
4000	3
3800	
~~3000~~	
1400	3
1200	5
1300	
1400	

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .. PART Cloudy 44

Focus ....7.03.....

Spectr. Temp. ..... Dome Temp./Hum. -5.1°C 64.4%H

Panson Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
30					CASS CCD	600 G=2622	306 u	4200A	25			
24	4000	3"	B 4.41	07Ve					24			12.4K
24	3800								26			
30	~~3000~~								27			8.7K
30									29c			
15	146P	3"	B 7.47	B2					30G		cloudy Δα -00010 Δδ -00318	3.4K
30									8c			
30									8			
22	6200	3"	B 5.80	K4.5 III					9		cloudy	9.6K
30	6500								10			9K
									11			
									11			
15	5400		B 5.31	G4 III-IV					12			12.9K
20	4600								14			13.2K
									16			

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Date 1994 Nov 26/27 Observers Ken/Tim

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
28690	bias 4				01:33				
91	comp							FeNe clear	30
92	HD 62285	07h 38m 8.0	+26° 01'	01:40:02		01 51 E			360
93	"	"	"	01:47:18		01 39E			676
94	Comp							FeNe clear	30
95	Comp							"	"
96	HD 46150	06 2636	+5 00	02 07 56		00 01 W			1084
97	Comp							FeNe clear	30
98	Comp							"	"
99	HD 74395	08 38 48	-6 52	02 34 08		01 58 E			274
CC28700	HD ~~74395~~	"	"	02 39 18		01 53E			257
01	~~BIAS~~ Comp							FeNe clear	30s
02	BIAS (4)			02:47					
03	comp								30
04	HD 89025	10 11 08	23 54 57	02:54:47		315E			64
05	"			02:57 48					65

Spectr. Temp
Focus 7
Spectr. Temp

Exp. Mr	Sec
2900	
6,240	2
700	3
5340	3
5500	
4000	
2700	

Spectr. Temp. ..... Dome Temp./Hum. -4.8°C 63.6% Transparency Conditions .. Part. cloudy 46

Focus ....7.03.....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	600 l/mm G-2622	306	4200Å				
								8			
2900		B 6.85	K4.5 II.					9		some cloud	4.4 K
6,240	2"-3"							10			9.7 K
								11			
								11			
700	3"	B 6.60	O6f Ve					12	?? Looks very early however	only (seems too faint) thin cloud this time	1.8 K
								13			13.5 K
								13			
5370	3"	B 5.46	G1 Ib					14			
5500								14			10.9
								16			
								1/2			
								16			
4000		V 3.44	F0 III					17			12.3 K
2700								18			7 K

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Date 1994 Nov 26/27 Observers Km/Tn

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Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Sec
CC 28706	comp										
707	comp										
708	HD 87737	10 01 53	+17 15 01	03 04 47					62	3570	
709	"	"	"	03 09 11					30 ~~50~~	4200	
710	comp										
711	comp										
712	HD102212	$11^h 40^m.7$	+07°05′	03 16 29		04 19 E			200	5150	
713	"	"	"	20:48		04 10 E			418	9800	
714	comp							Fe Ne clear	30s		
715	BIAS(4)										
716	comp								30		
717	HD52938	$06^h 58^m.0$	−08°19′	03 37 06		N			22.07	1915	3
718	comp										
719	~~HD101501~~	~~11h 35m 47s~~	~~+34° 46′~~	~~comp~~							
720	HD101501	$11^h 35^m 47^s$	+34° 46′	04 24 39		02 52 E			100	3340	
721	comp										

Spectr. Temp.
Focus 7
Spectr. Temp.

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions . P.a.r.t. cloudy..... 48

Focus .....7.03.....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
							4200A	20			
								20			
3500		V 3.52	A0Ib					21			8.7K
4000								22			11.2K
								23			
								25			
5150		B 5.54	M1 IIIab					26			6K
9800								27			12.5K
								28			
								1/2		CCDT = −100.6°C	
								29			
1715	3"	V 7.8	K3.5Ib					30			S/N ~70/1
								8			
								8			
3340		V 5.33	G8V					9			6.7K
								10			

pg#869

Date 1994 Nov 26/27 Observers Km/Tg

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Sec
722	bias(4)				04:45						
723	comp										
24	HD103287	11 4834	+541503	04 5130		02 54E			28	3500	
25	"	"	"	04 5253					22	3500	
26	comp							FeNe check	30s		
27	comp							"	"		
28	HD113226	12 5712	+11 2948	05 0021		03 53E			60	3600	
29	"	"	"	05 0207					110	≈7100	
30	comp								30s		
31	comp								30		
32	HD109358	12 2900	+415403	05 1143		03 12 E			115	4100	
33	"	"	"	05 1459					116	4100	
34	comp								30		
35	comp								30		
36	HD113139	12 5624	+565408	05 22 20		03 31 E			180	2900	
37	"			05 26 41					20P	4600	

Spectr. Temp.
Focus
Spectr. Temp.

Spectr. Temp. ..... Dome Temp./Hum. ...-5.5C 63.6% Transparency Conditions ...mostly cloudy... 50

Focus ...7.03.....

Spectr. Temp. ..... Dome Temp./Hum. .....

MAr

Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
							306u		1/2			
									8			
28	3500		V 2.44	A0V					9			
22	3500								10			12K
36									11			
14									12			
60	3600		V 2.83	G8III					14			9
45	7100								15			16.2K
35									16			
30									16			
115	4100		V 4.26	G0V					17			11.5K
116	4100								17			11.5K
30									20			
30									20			
100	2900		V 4.93	F2V					21			8.5K
205	4600								22			14.2K

5/p39 9/21

Date 1994 Nov 26/27 Observers Km / JT

Emulsion Batches:

Spectr. Temp.
Focus 763
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Seeing
CC28738	Comp							FeNe Clear	30		
39	Comp							"	"		
40	HD 120315	13 43 36	+49 48 45	05 36 40		4 03 E			5	4200	
41	"	"	"						12	4200	
42	Comp							FeNe	30s		
43	Comp							"	"		
44	HD 127665	14 27 31	+30 48 37	05 45 59		04 29 E			564	5900	
45	"			05 55 39					147	5900	
46	Comp							FeNe	30s		
47	BIAS(4)										
48	Comp								30s		
49	HD121370	13 49 55	18 53 56	06 03 57		03 39 E			215	3200	
50	Comp										
51	BIAS(4)										
52/53	Comp / Stellar					0 0	+40°	FeNe Clear	30/40	-515	

Spectr. Temp. ..... Dome Temp./Hum. -5.7°C 63.6% Transparency Conditions Cloud from SE now 52

Focus 7.03 Note on Nov 29 set was 7.13

Spectr. Temp. ..... Dome Temp./Hum. -5.5°C 64% [note Nov 29, But focus was OK] mAx

Comparison Filter	Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	30							306a	4200	23c.			
	"									23			
	15	4000		V 1.86	B3 V n					~~24~~			14K
	12	4200								25			15K
	30									8			
	5									8			
	564	5900		V 3.58	K3 III					9		Cloud again (thick)	8.5K
	147	5900								10		(thin)	9.2K
	30									11			
										1/2			
	30									8			
	215	3200		V 2.68	G0 IV					9		Thick cloud	7.3K
										11		CCD warming - 98°C	
	24	-5.5°C			7.03 set					3/4		All to workers Persons	

p. 53 Note Last CC # is a 28763, back 10 pages (Tests)
Also Current warm air is 94-118

~~Emulsion Batches~~: no filters anywhere

Date 1994 Dec. 1 Observers {Vys} Smt with one [Hlw]

WWV clock unavailable

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	(s) Exp.	Exp. Mtr
CC28764/5	COMP/STELLAR HARTMANN					0^h	$-3°$	FeNe clear	20/30	
66	BIAS x 4				01 13					
67	COMP							"	20	
68	HD 36395	05 26 18	-03 41	01 18 56		$0^h 31^m$ W			1300	1225
69	COMP							"	20	
70	BIAS x 4				01 44					
71	COMP							"	20	
72	AC+16 777-164	05 36 15	+15 17 17	01 54 42					2520	250
73	COMP							"	20	
74	BIAS x 4				02 40					
75	COMP							"	20	
76	BD-2 3000	corrected for proper motion from 2000 09 48 10	-03 13 04	02 48 11		$2^h 9^m$ E			2000	2/6
77	COMP							"	20	
78	COMP							"	"	
79	HD 95735	10 57 54	+36 38	03 39 52		$2^h 45^m$ E			930	1008

CCD Spectr. Temp. −100.4°C Dome Temp./Hum. −0.8°C/63.9% Transparency Conditions just cleared 54

Focus 6.93

Spectr. Temp. ..... Dome Temp./Hum. .....

FANS ON

420 0 50 1024 4 1 CCDFMT

Comparison Filter(s) Exp.	Exp. Mtr.	Seeing	~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ LAMBDA	P.H.	Program	Remarks	~~Quality~~ MAX AOV
20/50					CASS CCD	1800 l/mm G=5115	306μ	5303 Å	3/4	FOCUS TEST	HOT PIXEL @ COL 26	
									1/2			
20									5			
1300	1225		7.97	M1					6	Vys 9 Marcy Standard	close to hot	3000
20									7			
									1/2			
20									8			
2500	280		10.61	M0					9	Vys 467 Smt {Vys3}	not guided @ beginning (drawing field ★) no published RV	370 above b/g
20									10			
									1/2			
20									11			
1000	216		10.54	M0					12	Vys 560 Hlw {Vys3}		300 above b/g
20									13			
									14			
32	1508		7.48	M2					15	Vys 594 Marcy Standard	high proper motion	4300

p. 255

Date 1994 Dec 1 Observers [Hlw] Smt / [Eugs] iks backup

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison (s) Exp.
CC28780	COMP							FeNe clear	20
81	BIAS x4				03 58				
82-90	FLAT x9					0^h	+24°	Tung ½ Ap.	4
91/92	COMP/STELLAR HARTMANN					"	"	FeNe clear	20/30

CCD ~~Spectr~~. Temp. -100.4°C Dome Temp./Hum. -1.5°C/66.8% Transparency Conditions the proverbial "fine" 56

Focus 6.93

FANS ON

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
								16			
								1/2			
								17		median AVU max ~ 12.8K	13.4 K →12.5K
								18/19	FOCUS TEST		
	Backed up to Perseus & WORM										

mparison er (S) Exp.

20

4

2430

57 Thurs / Fri

Date 1994 Dec 1/2 Observers KK / SMT

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE08278	Hartmann Test IN							ThAr	20
9	OUT								20

following day: 3 sets of 1800s darks followed by 3 biases
full 1024 x 1024 format

labeled fdark_b1-b.fts

last dark & biases spoiled
Telescope slew during readout apparently killed readout sequence

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions 58

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					1200/	60μ	3960Å			T = 2.2°C focus = 240(?)	

59 pg#2

Date 1994 Dec 2/3 Observers KK / TH / SMT

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE08280	BIAS(4)				22 30 isl				
81	COMP							ThAr Clear	15s
82	HD202109	21 087	+29 49	18 0027	17 55 30	0144 W			1633
83	Comp							ThAr Clear	15
84	BIAS(4)				23 33				
85	COMP							"	"
86	HD215182	22 3818	+29 4200	18 4003	F	0042W			930s
87	Comp							ThAr Clear	15s
88	Comp							"	"
84	HD182640	19 2030	+2 55	19 07 46		04 51 W			2377
90	Comp							ThAr Clear	15s
91	BIAS(4)			19 48					
92	Comp							ThAr Clear	15s
93	HD183192	19 26 42	+27 4500	19 5736		05 24 W			1660
94	Comp							ThAr	15s

CCD Spectr. Temp
Focus
Spectr. Temp

Exp. Mtr	Sec
3500	
2272	
841	2
1550	2

CCD ~~Spectr~~. Temp. −101.8°C ..... Dome Temp./Hum. +6.5°C 58% Transparency Conditions ....Fine.... 60

Focus ...1240.....

Spectr. Temp. ..... Dome Temp./Hum. .....

Noted that No Filter was in Exposure meter slide.

Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Max Quality
					echelle CCD 17.80 tilt	1200 l/mm ~~[illegible]~~ .4460	60μ 400μ Height=.225	=.277 3960Å	1/2c.			
15s									2			
1633	3500 ~~[illegible]~~	<2"	4.2	G8 II					3ci	HSK pgm	CSS 386 time Reset during exposure.	1900.
15									4			7.3K
									1/2			
11									4			
980s	2222		B 3.8	G8 II ? +F ?					5c.		(S/N 140/1 @ center)	1.3K
15s									4			
"									4			6.1K
2317	841	2"-3"	3.68	F0 V					6		(at center < 30/1 S/N) * Telescope East Side	40ADU above Background
15s									4		* Counts too Low	
									1/2			
1559									4ci			5.9K
1660	1550	2"-4"	4.2	K5 II ? +B					2ci		Tilted (guidal) to hopefully account for Refraction. Blue should be East side of image.	100 ADU ABOVE Background
155s									4ci			

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p942

Date 1994 Dec 2/3 Observers [KK] Th. / Sat

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE08295	comp for HD 186791	19 41 30						ThAr	15s
96	HD186791	19 41 30	+10 22	20 38 01		5 47 W			
97	Comp CE08298			21 06				ThAr	15s
98	Comp							"	"
300	HD172167	18 33 36	+38 41	21 11 36		7 31 W			1615
301	Comp							ThAr	15s
02	COMP							"	"
03	HD209790	22 00 54	+64 08 00	21 49 07		5 08 W			3161
04	Comp							ThAr	15s
05	BIAS(4)				22 44				
06	COMP							ThAr	15s
07	HD6961	01 05 00	+54 37	22 55 13		3 11 W			3385
08	Comp							ThAr	15s
09	BIAS(4)				23 55				
10	COMP							"	15

Spectr. Temp
Focus
Spectr. Temp

Exp Mtr	Se
640	4
6920	
1431	

Spectr. Temp. ..... Dome Temp./Hum. 14.8°C ... 65.3% Transparency Conditions ... slightly hazy 62

Focus ... 1240 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

MAX HU

panson Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst. Echelle 17.80°	~~X~~ Grating/ Tilt	Slit	~~Emulsion~~	~~P.H.~~ U	Program	Remarks	Quality
15s						1200 l/mm x: 4460	~~30μ~~ 400μ = H	3960Å	4ci		PROBLEM	4.2
	640	4"-6"	2.72	K3II					5ci	Std Vel	Telescope Still East Side	very weak
15s									4co			
4									4ci			
1615	6920	extreme ?	0	A0V					3e.	Vega	S/N 140/1 at center	1.5K
15s									4ci			
"									4			
3161	1431	<2"	B 4.63	A3m					5	KK pgm	Telescope Still East Side	650 arcsec b/g
15s									4			
									1/2			
15s									4			8.5K
3385	2000	1"	4.33	A7V					6	KK pgm		2.0K
15s									4			8.4K
									1/2		clean!	
15									4			

63 pg#3

Date 1994 Dec 2/3 Observers [KK]/Smt./Tg

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Spectr. Temp
CEO 8321	HD 29316	04 32 00	+53 17 00	00 08 36		0 53 W			3256	796	1°
12	Comp							ThAr	15sec		
13	BIAS(4)				01 06						
14	Comp										
15	HD 34029	05 09 18	+45 54 00	01 19 54		00 48 W			837	20,000	0°
16	Comp							ThAr	15s		
17	HD 34029			01 36 19		01 02 W			688	20,000	
18	COMP							"	15		
19	HD 34029			01 51 25		01 15 W			554	20,000	
20	COMP							"	15		
21	BIAS(4)				02 05						
22	COMP							"	15		
23	HD 47105	6 31 54	+16 29	02 13 04		00 18 W				107	1°
24	COMP							"	15		
25-29	FLAT x5					2 40 E	+23 40	Tung clear	200		

Focus ... 24

Spectr. Temp.

CCD ~~Spectr~~. Temp. -101.5 Dome Temp./Hum. +3.9°C 67%H Transparency Conditions Fine, v. very slight haze 64

Focus .240

Spectr. Temp. ..... Dome Temp./Hum. .....

Comparison Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	⌧ Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	max Quality
8256	796	1"	V_{AB} 5.36	A5n	echello 17.80	1200 tilt=.4460	60μ 400μH	3960Å (c Lambda)	3c,	KK pgm		700 above b/g
15sec									4			8.0K
									1/2			
			V 0.08	G5IIIe +G0III					4			
837	20,000	OK							5c,	KK Capella		12.3K
15s									4			
688	20 000								5	KK Capella		14.2K
15									4			
554	20 000								5	"		14.3K
15									4			
									1/2			
15									4			
	107	1-2"	B 1.9	A0IV					6	KK γGem	Cloud now	500 above Background
15									4			
200							60μ wide 100μ = .195 height		2		TOPPED UP DEWAR BEFORE HAND.	7600 →8100

65 #4

Date 1994 Dec 2/3 Observers [KK] Tu/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE0083 30/31	Inboard/Outboard Hartman			0340		0240E	+24°	THA	30/40
32	BHS(4)								
	~~More Dom motion tests by Batch from 3Hr Dec 3 To 2Hr Dec~~								

CCD Spectr. Temp.
Focus
Spectr. Temp.
Exp. Mtr Sec

CCD
~~Spectr~~. Temp. ..... Dome Temp./Hum. +3.5°C 66.8%H Transparency Conditions ... Mostly cloudy 66

Focus ... 2.40 ..... — completely so.

Spectr. Temp. ..... Dome Temp./Hum. +3.6°C 66.3%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	× Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
(Still set for too cool a temp)				echelle CCD	1200 ~~Height~~ Height	60u width 400u	3960A°	7/8c.	focus test!	CCD FMT 0 0 128 1024 8 1 Telescope East Side	
						"		1/2c.		6 0 256 1024 4 1	

67
pg#1 SAT/SUN

Date 1994 Dec. 3/4 Observers [illegible]/Smt./Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
33 ce083/34	in board/outboard					2 25W	+5°	ThAr	20/20		
35	BIAS(4)			00 11							
36	Comp							ThAr	15s		
37	HD34029	05 09 18	+45 54 00	00 16 37		0 17 E			530	18500	
38	Comp							ThAr	15s		
39	HD34029			00 27 13		0 02 E			811	25433	
40	COMP							"	15		
41	HD34029			00 42 36		0 12 W			742	22100	
42	COMP							"	15		
43	BIAS(4)			00 51					—		
44	COMP							"	15		
45	HD209790	22 00 54	+64 08 00	01 01 09		08 05 W			1606	265	3'4"
46	COMP							"	15		
47	Comp							"	15		
48	HD56986	07 14 12	+22 10 00	01 42 47		00 44E			1123	5.22	4"

Spectr. Temp. 45
Focus .24
Spectr. Temp.

CCD Spectr. Temp. −100°C ..... Dome Temp./Hum. +6.3°C 73%H Transparency Conditions clear − cloudy 68

Focus .244 .....

Spectr. Temp. ..... Dome Temp./Hum. +5.7°C 74.8%

Comparison Meter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst. Echelle CCD	X Grating/ Tilt	Slit	~~Emulsion~~ CLAMBDA	~~P.H.~~ Ci	Program	Remarks	max Quality ADU
2/20					17.80 tilt	1200 l/mm .4460	60μ width 400μ Height	3960A	4/5c	focus	CCD FMO 0 128 1024 8 1 ↓ 4 5 Right	
									1/2		0 0 256 1024 4 1	
15s							500μ Height		3c			
530	18500		✓ 0.08	G5 IIIe +G0 IV					4c	Capella	S/N > 300:1 near centre.	8K
15s									3			
811	25433								4	"		14.3K
15									3			7.5K
742	22100								4	"		11.0K
15									3			
–									1/2		clean!	
15									3			64K
1100	265	3-4"	B 4.63	A3n					5	KK	Tel E side. − clouded end	ADU = 700 MAX
15									3			
15									3		Tel westside again	
1123	522	4"	3.9	F0 IV					6c		Cloud again	700 above background

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pg #2

Date 1994 Dec 3/4 Observers [KK] Th / Sant

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE08349	Comp							ThAr	15s
50	BIAS(4)								
51	BIAS(4)								
52 – 56	FLATS x 5					2 55W	+16 13	TUNG	20s
57	BIAS(4)								
Then Non motion Tests from ≈ 3 AM Dec 4 to 2AM Dec 5, with one Topup ≈ 1.7 EST									
CE08358	BIAS(4)			03 10 41					
59	FLAT					W 00 00 30	−33°	TUNG	10s
60 – 93	Comp 5	By Batch	separated By 1440 sec DARK					ThAr	20s
CE08394	FLAT			17 05				TUNG	10s
CE08395 – 414	Comps	By Batch		17:29 → 01:22				ThAr	20s
415	FLAT							TUNG	10s
416 – 417	Comp – (one only) BIAS (4)			01 47				ThAr	90

CCD ~~Spectr.~~ Temp. — 101.8°C. Dome Temp./Hum. +6.0°C 74.7% H Transparency Conditions Cloudy mostly 70

Focus 1.244

Spectr. Temp. ..... Dome Temp./Hum. +6.2°C 75%

MAX

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
						W 60u H 800u	3960A	3			
								1/2			
								1/2			
						W=60u H=700u		3		7.1K=>7.6K	
								1/2c;			
Backed up to WORM & Perseus											
Dome T-+6.0°C						60u H 700u	3960A	1/2	Non Motion Tests	CCD FMT - 340 415 125 220 1 1	
								3c;		(CCD Temp at Bottom ie no Regulation)	
										Dome T=+6.9°C @ 0330	
								7c.		CCD T now -108°C	
Note - Throughout Period, checks with weather Radio indicated little Air pressure change. — Then Topup and continuation.										Temp 6.8°C @ 20:26 Dec 4 6.6°C @ 00:32 Dec 5	
										Dome T = 6.7°C @ 02AM H=86% Dec 5	

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Date 1994 Dec 5/6 Observers KK

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE08418/9	Hartmann test			17:				Thar	10s
20/1	Hartmann test			18:31					
22/23	"								
24/25	"								
26/27	"			18:45					
CE08428/29	DARK	Note: CCD Temp probably x-116°C for this one,		21 06					1800s
30-32	Biases x 3	Run by batch * KKTNDK.BIAT		01 4650	(DARK is 1st in batch it seems)				
33	Dark								1800
34-36	Biases								
37	Dark								
38-40	Biases								
41	Dark								
42-44	Biases								
45	Dark								
46-48	Biases								

Spectr. Temp.
Focus
Spectr. Temp.
Exp Mtr

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions 72

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
										F.=.244 T = 7.6	
										F=.244 T= 7.6	3060 4232 3165 4589
										F= .224 "	~~3290~~
										F = .264	3290
										FULL Chip	
Topy Completed by 01:36 - CCDT Set to -100°C									* I renamed KKDARK.BAT because there is a KKDARK.FOR in same directory (Just to be safe)		
									* Log File of problem batch Run is "~~KKlog~~." "CCDLOG.KK"		

73 pg #1 Wed / Thur

Date 1994 Dec. 7/8 Observers [Bin] T.a.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC287 93/94	Comp / Stellar HARTMAN					0 0	+42 37	FeAr Clear	50/60
CC28795	BIAS(4)								
96	Comp							FeAr Clear	60s
97	HD 37017	05 30 24	-04 34	230857		01 18 E			1160
98	Comp							FeAr Clear	60s
99	BIAS(4)			23 32					
CC28800	Comp							FeAr Clear	60s
01	HD 21364	03 21 42	+09 23	233743		01 07 W			
02	Comp							FeAr Clear	60s
EG 40 628 631	HD 29587	04 34 30	+41 57	2355				4x	67ms
632 633	"					00 03 W		2x	133ms
CC28803	Comp							FeAr Clear	60s
804	HD 29587	04 34 30	+41 57	235658		00 22 W			1016
805	Comp							FeAr Clear	60s
806	BIAS(4)			00 16					

CCD Spectr. Temp.
Focus ... 7.00
Spectr. Temp.

Exp. Mtr	Seec
B:30 Filter	
4010	
2:700	
1400	

CCD Spectr. Temp. -100°C Dome Temp./Hum. -4.3°C 50%H Transparency Conditions Clear but hazy 74

Focus 7:00

medium & cold NNW wind

Spectr. Temp. Dome Temp./Hum. -6.2°C 62.5%H

Telescope focus set to 2745

432 0 50 1024 4 1 CCDFMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG 39 Filter				CASSCCD *	1800 l/m 42.7°→42.8°	306μ	4475Å	3/4		* Hot pixel col 23 Row 144 No grating tilt 'G' setting Tonight	
								1/2			
								6c;			
4010	very poor 8"?	656	B2V					7c;	Bln pgm	S/N = 170/1	
								8c;			
								11/2c;			
								9			
20,700	5"	366	B8p					10	Bln pgm		max 8k
								11	Wind NW 19 Kms/hr at Pearson (weather Radio)		
	8"	7.29	dG2		ABOVE 306μ slit				Seeing test	medium / Light NNW wind Dome west.	
									"	Cold High pressure coming in	
								11		No Fans	
1400	6"	7.29	dG2					12	Std/vel	Same as seeing test	
								13			

75 pg 42

Date 1994 Dec 7/8 Observers [Bln] T.n

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Spectr. Temp.	Focus
CC 25807	Comp							FeAr Clear	60s	8539 filter	
08	HD 37017	05 30 24	-4 34 00	00 22 19		00 03 E			1200	4550	5
09	Comp							FeAr Clear	60s		
10	Comp							"	60s		
11	HD 42111	06 03 48	+02 31 00	00 48 12		00 20 E			575	5800	6
12	Comp							FeAr Clear	60s		
13	HD 42111	06 03 48	+02 31 00	01 01 42		00 07 E			632	5540	5
14	Comp							FeAr Clear	60s		
15	BIAS (4)										
16	Comp							FeAr Clear	60s		
17	HD 37017	05 30 24	-4 34 00	01 18 40		00 51 W			1091	4830	6
18	Comp							FeAr Clear	60s		
19 → 27	FLATS x 9					00 55 W	-4 31	TUNG Clear	13		
28/29	Comp / stellar	HARTMAN				00 01 W	+26°	FeAr Clear	50/80	-72°C	
30	BIAS (4)										

Spectr. Temp. ..... Dome Temp./Hum. -6.2°C 62.4%H Transparency Conditions Part cloudy 76.

Focus 7.00

occasional SNOW @ End

~~Spectr~~ CCD Temp. -100.4°C Dome Temp./Hum. -7.2°C 67.5%H

c LAmbDA

max 404

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG 39 Filter				CASSCOD	1800 l/mm 42.75 °/H	306a	4475A	14			
4550	5 4/8"	6.56	B2V					15	Bln pgm		
								16			
								17		(S/N ≈ < 200 l ≈ nearby companion got on slit ≈ 10 secs)	
5800	6"	B 5.80	A3Vn					18	Ashell wide		1800
								19			
5540	5"	5.80	A3Vn					20	Ashell wide (Repeat)		
								21			
								1/2			
								22ci			
4830	6"	6.56	B2V					23	Bln pgm		
								24ci			
								25ci			13.7
-7.2°C		Set 7.00		Rigton @ 300 Row II				26/27			
				All to Persons & WORM							

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Date 1994 Dec 8/9 Observers Smt/{Vys}

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	(s) Exp.
CC28831/2	COMP/STELLAR HARTMANN					0^h	+43°	FeNe clear Ap	20/30
33	BIAS x4			18 48					
34	COMP							"	20
35	Vys 351 AC+17 303-138	00 03 19	+16 52 12	19 10 08		0 17 W			1367
36	COMP							"	20
CG40634-7	HD3765	00 35 18	+39 40			$0^h 02^m$ W			4x.067
CG40638/9	"	"	"		19 50				4x.133
CC28837	BIAS x4			19 53					
38	COMP							"	20
39	Vys 84 BD+40 45	00 17 06 (2000)	+40 56 54	20 02 41		$1^h 2^m$ W			1460
40	COMP							"	20
41	BIAS x4			20 42					
42	COMP							"	20
43	Vys 364 AC+71 532	00 55 26	+71 08 49	20 44 50		$1^h 05^m$ W			1800
44	COMP							"	20

Spectr. Temp. -100.4°C Dome Temp./Hum. ~~[illegible]~~ -4.2°C/69.1% arising Transparency Conditions hazy, ~7 thin cloud. TB.

Focus 6.97 FANS ON

Spectr. Temp. ..... Dome Temp./Hum. ..... 430 0 50 1024 4 1 CCDFMT

panson (s) Exp	Exp. Mtr.	Seeing	✓ ~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	~~P.H.~~ C.	Program	Remarks	Quality max AOV
20/30					CASS CCD	1800 l/mm 47.8 degrees tilt.	300μ	5300Å	3/4 C1	FOCUS TEST.	DONE @ CCD T=-125°C	
									1/2		DONE @ CCD T=-100°C SE FAN OFF	
20									5			
1367	500	~3"	10.73	MO					6	{Uys}	lots of sky, close to hot cloud increasing.	800 above b/g
20									7			
4x.067	190, 180 218, 201 223, 160	~3"	7.36	dK5					-	SEEING TEST	Dome W, no wind, thin cloud, 80% + on catwalk	
4x.173									-	"	-3.7°C, 68.3% at end	
									1/2			
20									8			
1440	2100	~3"	9.00	MO					9	Marcy Standard	Thin cloud. close to hot again	1100
20									10			
									1/2			
20									11			
1530	840	3-4"	10.06	dM4e					12	{Uys}	thin cloud.	600 above b/g
20									13			

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Date 1994 Dec 8/9 Observers Smt. / E. Vyas

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	(s) Exp.
CC28845	COMP							FeNe clear Ap.	20
46	Vys 395 AC+20 821-180	02 30 14	+19 47 07	21 30 21		$0^h 24^m$ W			2200
47	COMP							"	20
48	BIAS x 4			22 09				~~4x~~	~~.001~~
CG40640-3	MD19509							~~2x~~	~~.167~~
44/45	"				22 20.	$0^h 4^m$ W		4x	.067
								2x	.133
49	COMP							FeNe clear Ap	20
50	Vys 416 A/B AC+58 20564/5	03 08 25	+57 48 08	22 41 22		$0^h 49^m$ W			1801
51	COMP							"	20
52	Vys 416 A/B AC+58 20564/5	"	"	23 14 38		$1^h 30^m$ W			2189
53	COMP							"	20
54	BIAS x 4			23 54					—
55-63	FLAT x 9					0^h	$+35°$	Tung ½ Ap.	4
64/65	COMP/STELLAR HARTMANN					"	"	FeNe Clear	20/30
66	BIAS x 4			00 43					

Spectr. Temp.
Focus
Spectr. Temp.

Exp. Mtr | Sec

684

489

500

Spectr. Temp. ...-10.1°C..... Dome Temp./Hum. -5.1°C/73.3% Transparency Conditions. thin cloud..... 80

Focus .....6.97..... NE FAN ON.

Spectr. Temp. ..... Dome Temp./Hum. -5.3°C/73.1% @ FOCUS TEST

Exp. Mtr.	Seeing	✓ ~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CLAM3DA	~~P.H.~~ CI	Program	Remarks	Quality max ADU
				CASS CCD	1800 l/mm tilt = 47.8°	306μ	5300 Å	14			
684	?	10.7	M2					15	{V45}	Secondary might be out of focus, too dim to tell.	250 above b/g
								16			
~~220, 209~~								½			
~~220, 209~~								—			
220, 209 210, 218								—	SEEING TEST		
220, 197								—	"		
								17		spec. controller reset beforehand.	
499		combined? 10.0	M0	S/N	≳ 50:1			18	{V45} 416A/B	Southern one. just barely separated.	280 above b/g
								19			
500		"	"					20	{V45} 416A/B	Northern one just barely separable.	225 above b/g
								21			
								½		CLOUDED IN	
								22		CLOCK DRIVE OFF	13.2K → 12.3K
	Backed up to			WIRM & Persens				23/24	FOCUS TEST	T = -5.3°C FOCUS = 6.99	

8 pg#1 Sun Mon

Emulsion Batches: .....

Date Dec 11/12 ~~Dec~~ 1994 Observers [Bh] T.H. / Smt.

CSS Time Ahead 2.9 secs from WWV Time ~~set to WWV Time~~

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC288 67/68	Comp / Stellar	Hartman					+35°	FeAr clear	40/70
69	BIAS(4)								
70	Comp							FeAr clear	60s
71	HD 37017	05 30 24	-04 34 00	23 08 27		00 51 E			1634
72	Comp							FeAr Clear	60
73	BIAS (4)			23 46					
74	Comp							FeAr Clear	60s
75	HD 21364	03 21 42	+09 23	23 51 15		01 38 W			530
76	Comp							FeAr Clear	60s
77	COMP							"	"
78	HD37017	05 30 24	-04 34 00	00 14 56		0 15 W			1815
79	COMP							FeAr Clear	60s
80	BIAS(4)			00 47					
81	COMP							FeAr Clear	60s
82	HD 42111	06 03 48	+02 31 00	00 55 31		0h 1m W			920
83	Comp							FeAr Clear	60s

Spectr. Temp. ccn −100°C ..... Dome Temp./Hum. −11.5° ..... 59% Transparency Conditions .. Hazy .. clearing .....

Focus .. 7.03 .....

Spectr. Temp. ..... Dome Temp./Hum. −12.5°C 61.3% Note - Tonight, we did not see slit in guiding view, but maximized with Exposure meter (South edge of STAR MAXAPU at bottom of view)

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	~~P.H.~~ Ci	Program	Remarks	Quality
BG39 Filter	~~very~~			CASS CCD	1800 l/mm Tilt 42.8	306m	4475	3/4	Rapid Temp drop	Spectrograph probably warmer	
								1/2			
								5			
4025	10"	6.56	B2V					6	Bln pgm	Slit view below monitor view. ∴ guiding by exposure meter.	See above b/g
								7			
								1/2			
								8			
23150	Bad	3.66	B8p					9	Bln pgm		75K
								10			
								11			
6070		6.56	B2V					12	Bln pgm		2100
								13			
								1/2			
								14			
6200		5.80	A3Vn					15	A shell star	wide	1900
								16			

83 pg #2

Date 1994 Dec 11/12 .... Observers [Bln/Wade] T.S./Smt.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC28884	COMP							FeAr clear	60
85	HD37017	05 30 24	-4 34	01 20 05		1h 16m W			1528
86	COMP							"	60
87	BIAS(4)			01 49					—
88	COMP							"	60
89	HD77190	08 55 51	+28 17 48	01 56 24		1h 43h E			970
90	COMP							"	60
91	COMP							"	"
92	HD37017	05 30 24	-4 34	02 24 39		2 20 W			1487
93	Comp							FeAr Clear	60s
94	BIAS(4)								
95	Comp							FeAr Clear	60s
96	HD89449	10 14 18	+19 59 00	02 59 10		02 08 E			417
97	Comp							FeAr Clear	60s
98	Comp for next HD37017							"	"

Spectr. Temp. 160
Focus 7.0
Spectr. Temp

Exp. Mtr	Sec
Bo 34 Filter	
5400	
5020	
5530	
6300	

CCD Spectr. Temp. −100°C Dome Temp./Hum. −14.1°C / 64.4% Transparency Conditions Slightly Hazy 84

Focus 7.03

Spectr. Temp. ..... Dome Temp./Hum. −14.5°C / 65.3% 430 0 50 1024 4 1 CCDFWT

LAMBDA

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	~~P.H.~~	Program	Remarks	Quality
BG 39 Filter				CHSS CCD	1800 l/mm Tilt 42.08°	306a	4475Å	17			
5400		6.56	B8p					18	Bln	Slightly < 200/1 S/N	1700
								19			
								½			
								20			
5020	still extreme	✓ 6.07	A8V̄n					21	Wide A-shell		1700
								22			
								23			
5530		6.56	B8p					24	Bln pgm		
		~~6.56~~	~~B8p~~					25	~~Bln pgm~~		
								½			
								26			
6300		✓ 4.79	F6IV					27	Std vel	(Wide Request)	
								28			
								29			

85 pg #3 Sun / Mon

Date 1994 Dec 11/12 Observers [Bln / Lude] Tn / Sant

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc28899	HD37017	05 30 24	-4 34 00	03 14 44		3 09 W			146
cc28900	Comp							Fe Ar Clear	60s
901	BIAS(4)			03 40					
902	Comp	Astrometric 2000						"	"
903	Vesta	06 27 06	+20 33 36	03 46 43		2h 56m W			1839
904	COMP							"	60
905	COMP							"	"
906	HD88195	10 05 09	-07 55 01	04 29 35		0 21 E			766
907	COMP							"	60
908	BIAS(4)			04 45				~~"~~	~~60~~
909	Comp							"	"
910	HD98058	11 11 36	-03 06 00	04 53 24		01 12 E			313
911	Comp							Fe Ar Clear	60s
912	Comp							"	60s
913	HD108283	12 21 24	+27 49 00	05 07 42		02 07 E		Fe Ar	334
914	COMP								60

CCD Spectr. Temp.
Focus
Spectr. Temp.

Exp. Mtr. | Secs

6639 Filter 4400

5000

3450

5750

CCD Spectr. Temp. −99.7 °C Dome Temp./Hum. −14.5°C 65.5% Transparency Conditions slight haze 86

Focus 7.03

Spectr. Temp. ..... Dome Temp./Hum. ..... MAY ADU

Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1416	BG 39 Filter 4400	Horrible ghostly	6.56	B8p	CASSCCD	1800 l/m 42.8°	30μ	4475Å	9c.	Bln pgm		
60s									10c.			
									1/2			
"									11			
1839	4500		✓ 1.65	G solar					12	Std. Vel.	Field DRown is checks out nicely	
60									13			
"									14			
7416	5000		5.91	A1V					15	Wide A-shell		1.7K
60									16			
~~60~~												
"									17			
312	7450		✓ 4.47	A7IVn					18	Wide A-Shell		4K
60s									19			
60									20			
334	5750		✓ 4.95	F0p					21	Wide A Shell		2K
									22			

87 pg # 4

Date 1994 Dec 11/12 Observers [illegible] / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC28915	COMP							FeAr Clear	60
16	HD108283	12 21 24	+27 49 20	05 24 29		2 12 E			430
17	COMP							FeAr Clear	60
18	COMP							"	"
19	HD118232	13 30 24	+49 32	05 41 14		2 42 E			290
20	COMP							"	60
21	BIAS(9)								—
22-30	FLAT × 9					2 36 E	+49°	Tung clear	13
31	Comp							FeAr Clear	60
32	HD118232	13 30 24	+49 32	05 59 23		3 24 E			310
33	Comp							FeAr Clear	60
34	COMP							"	"
35	HD138629	15 28 12	+41 14 19	06 12 02		4 07 E			405
36	Comp							FeAr Clear	60
37	COMP							"	"

Spectr. Temp.
Focus ... 7.0
Spectr. Temp.

Exp Mtr	Sec
5170	
7000	
7130	
1420	

Spectr. Temp. ..... Dome Temp./Hum. ~15°C 67% Transparency Conditions ... Hazy 88

Focus ... 7.03 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

MAX

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
								23			
5170		V 5.28	A1 III			306.	4475Å	24	Wide A shell	Δα +00 01 07 Δδ +00 01 30 South Brighter of pair	2.1K
								25			
								26			
7000		V 4.70	A5 V	House Lights Left on for this exposure				27	Wide A shell	S/N > 200 : 1	
								28			
								½			
								2			14.4K →13.2K
								.			
7,130		V 4.70	A5 V					27.	Wide A shell		
								28			
								28			
6980		V 5.02	A5 V					6	Wide A-shell		
								7			
								10			

p. 589

Date 1994 Dec 11/12 Observers [Wde] Tn/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC28938	HD102870	11 45 30	+02 20	06 26 45		0 15 E			170
39	COMP							FeAr clear	60
40	~~COMP~~ BIAS(4)								
41/42	COMP/STELLAR	HARTMANN				0^h	$+35°$	"	50/80

Spectr. Temp.
Focus
Spectr. Temp.

Exp. Mtr | Sec
8500

Spectr. Temp. ..... Dome Temp./Hum. 74.9°C/69.1% Transparency Conditions hazy 90

Focus 7.03

Spectr. Temp. ..... Dome Temp./Hum. .....

m 4x

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
8500		361	F9V	CASS CCD	1800 l/mm tilt=42.8°	306μ	4475Å	11	Std. Vel.		2.6
								13			

All to Perseus & WORM.

91 pg#1 Mon / Tues

Date 1994 Dec 12/13 .... Observers ... [R.M.] Sent. / Tu ....

CSS Time 2 10 secs Ahead Still

Emulsion Batches: .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC289 43/44	Comp / Stellar					0 0	+36°	FeAr Clear	~~60~~ 60
45	BIAS (4)			17 54					
46	Comp							FeAr Clear	60s
47	HD 180583	19 12 00	+27 45 00	18 06 57		4 26 W			1600
48	Comp							FeAr Clear	60s
49	BIAS (4)			18 38					—
50	COMP							FeAr Clear	60s
51	HD 204867	21 26 18	−06 01	18 41 52		2 22 W			208
52	Comp							FeAr Clear	60s
53	Comp							"	"
54	HD 203156	21 15 23	+37 49	18 53 48		2 49 W			400
55	Comp							FeAr Clear	60s
56	COMP							"	"
57	HD 214975	22 36 54	+56 19	19 09 26		2 20 W			2568
58	COMP							FeAr Clear	60s

Spectr. Temp. ..... Dome Temp./Hum. -9.8°C 70% Transparency Conditions. Part Cloudy increasing cloud

Focus 6.95

Spectr. Temp. ..... Dome Temp./Hum. -11.0°C 72.3%

424 0 50 1024 4 1 CCOFMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no exp meter filter				CASS CCD	1800 l/mm Tilt 550	306	*6400Å	3/4		*Actual center 6406Å	
								1/2			
								5			
3930	8"	6.14	F6I-IIb					6	V473Lyr	Rm pgm	2200
								7			
								1/2			
								8			
5000		2.97	G0Ib					9	Std vel	Cloudy	4K
								10			
								11			
5260		5.8 - 5.9	F2					12	Rm V... Cyg pgm	Cloudy	4.4K
								13			
OG560 filter installed								14			
≥3000		8.40	G0Ib					15	Rm Z Lac	Part clear now.	5.0K
								16			

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p942

Emulsion Batches: .....

Date 1994 Dec 12/13 ... Observers [Ron] Smith/Tay .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC 28959	BIAS(4)			19 54					
60	COMP							Fe Ar clear	60
61	HD 25361	03 56 42	+58 23	20 01 07		2 34 E			1280
62	COMP							"	60
63	Comp							"	"
64	HD 30282	04 41 06	+36 3200	20 30 56		2 48 E			1217
65	Comp	04 41 06	+36 3200					Fe Ar clear	60s
66	BIAS(4)			20 53					
67	Comp							Fe Ar clear	60s
68	Vesta	Astrometric J 2000 06 2620	+20 3600	20 59 43		3 59 E			1140
69	Comp							Fe Ar clear	60s
70	COMP							"	"
71	HD 44990	06 19 48	+07 08	21 28 04		3 35 E			187
72	COMP							"	60
73	BIAS(4)			21 44					

Spectr. Temp. -102.0°C Dome Temp./Hum. -11.0°C / 72.4% Transparency Conditions fine, now 94

Focus 6.95 Thin Real cloud

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CLAMBDA	P.H.	Program	Remarks	Quality
OG560 Filter				CASS CCD	1800 l/mm tilt 550°	30μ	6400Å*			*actually ~6406Å	
								17			
4078	poor	7.30 -8.07	F6 Ib -G2Ib					18	Rm RX Cam	≈ 250/1 S/N	6K
								19			
								19.			
2300	4"	V ≈7	F6 -G1					20	Rm AW Per		4K
								21			
								1/2			
								22			
2000		V ≈6.5	G					23	for Std vel use.	It moved west Relative to Last night's Field as it should of course.	
								24			
								24			
1580		B 6.5-8.0	F7Iab -K1Iab					25	Rm T Mon		
								26			
								1/2			

95 pg#3 Mon / Tues

Date 1994 Dec 12/13 Observers [Rm] Tm / Sm

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC28974-82	FLAT x 9					0h		Tung ½ 4p	6
83/84	COMP/STELLAR	HARTMANN				"		Fe clear	60/60

Spectr. Temp.
Focus
Spectr. Temp.
Exp. Mtr. | Sec

Spectr. Temp. -100°C Dome Temp./Hum. -11.0°C 77% Transparency Conditions Cloudy → Snow! 96

Focus 6.95

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 l/mm tilt = 550°	30μ	6400Å*	27		*actually 6406Å tonight.	13.5K →12.8K
								28/29	FOCUS TEST		
				Hill to warm Perseus							

97

Tues/Wed

Date 1.9.94 Dec. 13/14 .... Observers [Bln/wde] .. Tn/Smt ..

Emulsion Batches: .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc289 85/86	Comp / Steller	HURTMAN				00 00	+46 34		50/80
87	BIAS(4)			18 26					
88	Comp							FeAr clear	60
89	BD+26 3835 ~~#0 37017~~	20 09 36	+26 27	18 38 10		3h 57 W			1200
90	COMP							FeAr clear	60
91 – 99	FLATS x 9 using	FLAT13.BAT				4 03 W	+26 53	TungClear	13sec
cc29000	BIAS(4)			21 35					

Spectr. Temp. ..... Dome Temp./Hum. -6.0°C 63%64 Transparency Conditions Clearing PARTIALLY 88

Focus 7.03 .....

430 0 50 1024 4 1 CCDFMT

Spectr. Temp. ..... Dome Temp./Hum. ..... C LAMBDA

Then much cloud MAX

Exp. Mtr.	Seeing	V ~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
50/80					1800 l/mm Tilt 42.85	306 μ	4475 Å	3/4	focus		
								1/2			
60								5c.			
120 1036		8.6 -9.3	B8					6	DR Vul		140 above bkg
160								7			
135a								8c.			12.7K
								1/2	All to Perseus & Worm		

99
pg #1

Date 1994 Dec 18/19 Observers Bln/Tn

Emulsion Batches:

Time Reset to WWV Time

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC290 01/02	Comp / Stellar Ker TMAN					00 00	+44°	FeAr Clear	60/60
03	BIAS(4)								
04	Comp							FeAr Clear	60
05	HD 19275	030105	+740049	220727		00 49 W		1276	~~44~~
06	Comp							FeAr Clear	60s
07	~~HD 19275~~ BIAS(4)								
08	Comp							FeAr Clear	60s
09	HD ~~30614~~	044406	661000	015638		W			12
10	"			015946		0243W			~~125~~
11	"			020248					120
12	"			020544					127
13	"			020845					236
14	Comp							FeAr Clear	60s
15	BIAS(4)								
16	HD 30614	044406	+661000	021658					153

~~Spectr.~~ CCD Temp. ~-100°C Dome Temp./Hum. +01.0°C 87% Transparency Conditions Partially clearing 100

Focus 6.95

Spectr. Temp. Dome Temp./Hum.

CCD FMT 427 0 50 1024 4 1 MAXADU

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
OG560 Filter				CASS CCD	1800 l/mm Tilt 55.4° α?	306	6604Å	3/4	Focus		
								1/2.			
(8000 cnts)								5c	1st Try → SATURATED		
* This slightly saturated (2 strong columns)											
~~5000~~ 2300	~~4~~ 2-3"	V 427	A2V		(very cloudy)			6c	Telluric Std.	Some cloud (lots) Air mass 1.11	4.1K
								7c			
								1/2c			
								8c		Telescope East Side	
5000		V 429	09.5Ia					9c	α Cam pgm	Hα cam saturated	
4000								9c			8.7K
4015	3"							10c			12.5K
4023								11		7300/1 S/N	
4000								12		Some cloud	
								13		Air mass 1.18	
								1/2			
4000								14			12.5

101
Pg #2

Date 1994 Dec 18/19 Observers B/M / T.G.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC29017	HD 30614	04 44 06	+66 10 00	02 20 30		3 09			4.75
18	Comp								
19									
→ 38	FLATS x20					2 325W	+66 19	TUNG Ap=1/4	
39	BIAS (4)								
40/41	Comp / Stellar	Hartman				0 0	+31°	ReAr Clear	60/60

Spectr. Temp. -100.4°C Dome Temp./Hum. +00.3°C 82% H Transparency Conditions Cloud

Focus 6.95

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
2576						30μ	6604Å	15			
								16			
								17			13K
										*	
	+00.4°C		Set 6.95					19/20	focus test	Note we should have been set more like 6.88	
									Stellar 2.3 Pixel Rad		
	All to Perseus ε worm								It didn't cool down as much as I thought it would		

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Date 1994 Dec. 20/21 Observers Bln / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC29042/43	COMP / STELLAR HARTMANN							FeAr clear	60/60
44	BIAS(4)			not 21 38					
45	COMP							FeAr clear	60
46	HD30614	04 44 06	+66 10	21 27 29		1 44 E			140
47	COMP							"	60
48	HD30614			21 42 49		~1 30 E			225
49	"			21 48 15		1 22 E			218
50	"			21 53 26		—			221
51	COMP							"	60
52	BIAS(4)			21 38					
53	HD30614			22 01 26		1 09 E			230
54	"			22 06 55		—			223
55	"			22 11 50		0 58 E			227
56	COMP							"	60
57	HD30614			22 19 44		0 49 E			247

CCD ~~Spectr.~~ Temp. -101.0°C Dome Temp./Hum. +2.4°C/78.2% Transparency Conditions just cleared 104

Focus 6.90

BOTH FANS ON

Spectr. Temp. Dome Temp./Hum.

422 0 50 1024 41 CCDFMT

Comparison Exp.	Exp. Mtr. FILTER	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	max ADU Quality
30/60					CASS CCD	1800 l/mm HH=56.3°	306μ	6604 Å	3/4	FOCUS TEST		all @ Hα due to emission
									1/2			
60									5			
140	4000		4.29	09.5Ia					6	B/n	→ HUERIKON RESET DUE TO "UNDOCUMENTED SYSTEM ERROR"	
60									3			
225	8000								4	B/n		13K
218	"								5	"		13.4K
221	8120								6			14.2K
60									7			
									1/2		TAKEN BEFOREHAND	
230	8000								8	B/n		12.0K
223	8000								9			11.9K
227	"								10			11.7K
60									11			
241	8000								12	B/n		13.4K

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Date 1994 Dec 20/21 Observers Bln/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC29058	HD30614	04 44 06	+66 10	22 24 54		0 44 E			259
59	"			22 30 39		0 38 E			264
60	COMP							Fe Ar clear	60
61	BIAS(4)			22 38					—
62	COMP							"	60
63	HD19275	03 01 05	(+74 01 in HD) +74 00 49	22 44 28		1 19 W			403
64	COMP							"	60
65	COMP							"	"
66	HD30614	04 44 06	+66 10	22 59 21		0 11 E			211
67	"			23 04 30					226
68	"			23 10 34		0 01 W			225
69	COMP							"	60
70	HD30614			23 18 11		0 08 W			208
71	"			23 23 15		—			197
72	"			23 27 27		0 18 W			198

Spectr. Temp. ..... Dome Temp./Hum. +2.0°C/77.1% Transparency Conditions ..hazy but clear..... 106

Focus .....6.90.....

BOTH FANS ON

Spectr. Temp. ..... Dome Temp./Hum. .....

422 0 50 1024 9 1 CCDFMT

Exp. Mtr. FILTER (06 560)	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality (max ADU)
5010		V 4.29	09.5Ia	CASS CCD	1800 l/mm tilt=56.3°	306μ	6604 Å	13	Bln		12.6K
8000								14	"		14.3K
								15			
								½			
								16			
8010		V 4.87	A2V					17	Telluric Std.		10.5K
								18			
								19			
8000		V 4.29	09.5Ia					20	Bln		14.7K
"								21			10.2K
"								22			11.2K
								23			
8000								24	Bln	some high cloud.	10.9K
"								25			13.0K
"								26			10.5K

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Date 1994 Dec 20/21 Observers Bln / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC29073	COMP							FeAr clear	60
74	BIAS(4)			23 34					—
75	HD30614	04 44 06	+66 10	23 36 14		0 26 W			210
76	"			23 40 45		—			205
77	"			23 45 08		0 35 W			209
78	COMP							FeAr clear	60
79	HD30614			23 54 19		0 43 W			206
80	"			23 59 24		—			239
81	"			00 04 21		0 55 W			236
82	COMP							"	60
83	HD30614			00 12 45		1 03 W			243
84	"			00 18 02		—			282
85	"			00 23 58		1 16 W			270
86	COMP							FeAr clear	60
87	BIAS(4)			00 31					—

Spectr. Temp. ..... Dome Temp./Hum. +19°C/72% Transparency Conditions still hazy 108

Focus ..... 6.90 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

BOTH FANS ON

422 0 50 1024 #1 CCD FMT.

Comparison Exp.	Exp. Mtr. (Ok 560 FILTER)	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	max ADU Quality
60					CASS CCD	1800 ℓ/mm filt=56.3°	306μ	6604 Å	27	Bln		
-									½			
210	8052	~3"	4.29	O9.5Ia					28		clear.	10.7K
215	8010								29			14.3K
229	8000								30			11.1K
60									31			
224	8000								4			10.4K
239	"								5		~9K continuum →	11.5K
236	"								6			10.2K
60									7		SE DOME FAN TURNED OFF	
243	8000								8			11.2K
252	"								9			9.4K
245	8090								10			10.6K
60									11			
-									½			

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Date 1994 Dec 20/21 Observers Bln / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC29088	HD30614	04 44 06	+66 10	00 33 49		1 25 W			257
89	"			00 39 14		1 30 W			247
90	"			00 44 32		1 36 W			281
91	COMP							FeAr clear	60
92	HD30614			00 53 54		01 45 W			243
93	"			00 59 24		01 50 W			236
94	"			01 04 33		~1 55 W			242
95	COMP							"	60
CG40646-9	HD52860	06 57 39	+47 55 21					4x	.067
90/91	"					$0^h\ 5^m$ W		2x	.133
CC29096	COMP							FeAr clear	60
97	HD19275	03 01 00	+74 00 00	01 39 33		4^h 19 W			537
98	COMP							"	60
99	BIAS(4)			01 53 58					—
CC29100	COMP							"	60

CCD Spectr. Temp. -100.0°C Dome Temp./Hum. +17°C/71.6% Transparency Conditions hazy 110

Focus 6.90 NE FAN ON ONLY

Spectr. Temp. ..... Dome Temp./Hum. .....

422 0 50 1024 4 1 CCDFMT.

Comparison Exp.	Exp. Mtr. FILTER	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ LAMBDA	~~P.H.~~	Program	Remarks	Quality max ADU
267	8188	~5"	4.29	O9.5Ia	CASS CCD	1800 l/mm tilt=56.3°	306μ	6400 Å	12	Bln		14.9K
247	8000								13			12.2K
281	"								14			11.3K
60									15			
243	8000	5"							20			
231	8000								21			
242	8000								22			
60									23			
.067	173, 238, 193, 181		6.34R	B9III n					–	SEEING TEST	Done W, lite SW wind, above 30km slit, hazy, cloudy until 21 20 or so,	
.133	242, 246		"	"					–	"	83% catwalk. trailed star off screen & lost it between 1st & 2nd	
60									16		TELESCOPE ON E SIDE NOW.	
537	8000	1'8"	4.87	A2Vnn					17	Telluric Std.	1.3 airmass.	10.7K
60									18			
–									½			
60									23			

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Date 1994 Dec 20/21 Observers Bln/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC29101	HD30614	04 44 06	+66 10	02 02 39		2 56 W			294
02	"			02 08 54		—			231
03	"			02 13 46		3 05 W			227
04	COMP							FeAr clear	60
05	HD30614			02 21 48		3 14 W			217
06	"			02 27 12		3 19 W			213
07	"			02 32 13		3 24 W			230
08	COMP							"	60
09	HD30614			02 40 45		—			239
10	"			02 46 54		3 34 W			264
11	"			02 53 14		3 47 W			305
12	COMP							"	60
13	BIAS(4)			03 04 33					—
14	HD30614			03 08 50		04 03 W	?		380
15	"			03 11 41		04 08 W	?		281

Spectr. Temp. ..... Dome Temp./Hum. +1.4°C / 72.5% Transparency Conditions ..hazy..... 112

Focus .....6.90.....

NE DOME FAN ON

Spectr. Temp. ..... Dome Temp./Hum. .....

422 0 50 1024 41 CCDEMT

parison Exp.	Exp. Mtr. OG 560 FILTER	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ LAMBDA	~~P.H.~~ Ci	Program	Remarks	Quality MAX ADU
294	8030	~6"	✓ 4.29	09.5Ia	CASS CCD	1800 l/mm tiH=56.5°	30μm	6604 Å	24	B/M	TELESCOPE ON E	7.8K
231	8000								25		SIDE	9.4K
227	8135								26			9.1K
60	9812								27			
217	8000								28			12.1K
213	8000								29		seeing improved.	14.6K
230	8000								30			10.8K
60									31			
239	8000								4			10.6K
244	"								5			11.4K
305	"								6			10.0K
60									7			
–									½			
350	8000								8			9.2K
231	8020								9			10.7K

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Date 1994 Dec 20/21 Observers Bln / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Spectr. Temp. / Focus / Spectr. Temp / Exp. Mir / Filter / Sec
cc29116	HD30614	04 44 06	+66 10	03 25 14		4 18 W			249	8:00
17	COMP							Fe Ar clear	60	
18	HD30614			03 33 38		4 26 W			235	8:00
19	"			03 38 45					237	8:10
20	"			03 45 05		4 37 W			221	"
21	COMP							Fe Ar clear	60	
22	HD30614			03 53 05		~4 45 W			237	8:30
23	"			03 58 47		4 51 W			245	"
24	"			04 04 05		4 56 W			236	"
25	COMP							"	60	
26	BIAS (4)			04 11					–	
27	HD30614			04 14 41		5 07 W			225	8:00
28	"			04 19 28		5 12 W			243	[illegible]
29	"			04 24 45		5 17 W			269	[illegible]
30	COMP							Fe Ar clear	60	

Spectr. Temp. ..... Dome Temp./Hum. +1.1°C/74.7% Transparency Conditions ....hazy..... 114

Focus .....6.90.....

Spectr. Temp. ..... Dome Temp./Hum. .....

Comparison Exp.	Exp. Mtr. FILTER	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ LAMBDA	~~P.H.~~ C.	Program	Remarks	Quality
249	8000		V 9.29	09.5Ia	CASS CCD	1800 l/mm H/H=56.3°	306μ	6604 Å	10	Bln	TELESCOPE ON EAST SIDE STILL	11.0K
160									11			
235	8000								12			11.2K
237	8010								13			12.5K
221	"								14			11.9K
160									15			
237	8000								20			11.1K
245	"								21			13.0K
236	"								22			11.1K
160									23			
-									½			
225	8000								24			11.7K
243	8042								25			11.4K
261	8000								26			12.9K
60									27			

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Date 1994 Dec. 20/21 Observers B.In/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC29131	HD30614	04 44 06	+66 10	04 33 54		5 27 W			219
32	"			04 40 01		5 34 W			376
33	COMP							Fe/Ar clear	60
34-53	FLAT x 20					5 38 W	+66° 19'	Tung ½ Ap.	6
54	BIAS(4)			05 02					
55/56	COMP/STELLAR	HARTMANN				"	"	Fe/Ar clear	60/60

Spectr. Temp. ..... Dome Temp./Hum. +0.8°C/77.1% Transparency Conditions . still hazy .....

Focus ..... 6.90 .....

Spectr. Temp. ..... Dome Temp./Hum. +0.7°C/78.2% and overcast @ focus test.

Exp. Mtr. CG 360 FILTER	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CLAMBDA	~~P.H.~~ C.	Program	Remarks	Quality MAX ADU
8000	3"-4"	V 4.29	09.5Ia	CASS CCD	1800 ℓ/mm tilt=56.3°	306μ	6604 Å	28	B/n		13.0K
-"								29			10.6K
								30			
								31			13K → 12.3K
								1/2 3/4	FOCUS TEST		

All to Perseus & WORM.

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Date 1994 Dec 21/22 Observers KK/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CD00109-16	SKY FLATS x 7					$0^h 10^m$ W	+42 55	sky H_α filter	4 → 22
17-22	SKY FLATS x 6					"	"	sky no filter	6 →
123-4	BIAS (4)								
25	CAS A	1950.0 23 21 12	+58 32	18 24 12					300
26	CAS A			18 35 56					300
27	"			18 43 07					300
28	"			18 50 14					300
29	"			19 03 09					300
30	"								20
31-39	CASA x 9			–		1 35 W			20
140	GK Per	3 24 24	+43 33 32	19 43 25 ~~19 30 25~~		2 06 W			300 ~~60~~
141	"			19 51 46					300
142	"								600
143	"			20: 18 42					600
144-161	M 1	5 28.5	+21 57	20 52 05					20^s

CCD ~~Spectr.~~ Temp. -101.0°C Dome Temp./Hum. +5.7°C/63.9% Transparency Conditions clear 118

Focus 6.90 but not used

Spectr. Temp. ..... Dome Temp./Hum. +4.1°C/71.6% 300 360 400 400 1 1 CCDFMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD ~~DIRECT~~	DIRECT	SLITLESS		1		in "home" rack	
								2		position = no	
								½		vignetting	
—								5	KK		
—								6		AUTOGUIDER used for	
—								7		guiding display, still	
—								8		guided manually.	
—								9			
—								10			
—								11		RACK IN HOME POS'N.	
								2		CCD RE-FOCUSED. AUTOGUIDED	
								3		AUTOGUIDED 10s int	
										AUTOGUIDED "	
										" "	
										Guide probe in but no guiding	

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Date 1994 Dec 21/22 Observers KK/Smt, Smt {Vus}

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
162-166	M1	5 28.5	+21 57	21:18				Hα filter	20
167	M1			21 21 55				"	300
168	M1			21 29 07				"	"
169/70	3 STARS CLOSE TO HD23630 WHOSE NAMES ELUDE US	~ 3 41 30	~ +23 48					"	2x1s
CC29157/8	COMP/STELLAR HARTMANN			~~23 09~~		0h	+37° 45'	FeNe clear	20/30
~~59~~	~~BIAS x 4~~			~~23 34~~					
	~~COMP~~							~~FeNe clear~~	~~30~~
	~~HD36395~~								

Spectr. Temp.
Focus
Spectr. Temp.
Exp Mtr

Spectr. Temp. ..... Dome Temp./Hum. +3.3°C / 74.7% Transparency Conditions clear, moon rising now. !20

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	DIRECT	SLITLESS			LK		
								6		To Perseus only.	
								7			
								8			
				CASS CCD	1800 l/mm HH = 47.8°	30 μ	5303 Å	3/4	FOCUS TEST	TO WORM & Perseus RACK DIED.	
									~~Marcy Standard.~~		

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Date 1994 Dec 22/23 Observers KK / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	~~Comparison~~ Type/Filter	Exp.
CD00171	BIAS(4)							no filter	
172-181	Cas A x 10	23 21 12	+58 32	~18 20					20s
182-188	Cas A x 7			~18 30					300s
189	Cas A			19 13 37					120s
190-201	GK Per x 12	03 24 24	+43 33 32					Hα filter	300 s
02	BIAS(4)			20 50					
203-204	M 1 x 2	05 28 30	+21 57	20 59				Hα filter	300s
205-216	M 1 x 12							SiOA filter	300s
217	SKY FLAT	$4^m 30^s$ & 19° from Moon.				-5 E	+8°	"	360
218	MOON FLAT							"	.1s
219-223	" x 5							"	.2s
224-229	" x 6							"	.2s
230	BIAS (4)								
231-235	MOON FLAT x 5							Hα	.03
236-238	MOON "FLAT" x 3							"	.03
239-243	MOON x 5								.05

Spectr. Temp.
Focus
Spectr. Temp.
Exp Mtr Seeing

Spectr. Temp. -100°C Dome Temp./Hum. 4.5°C / 60.8% Transparency Conditions little hazy, dry 1.2

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

300 420 400 400 1 1 CCDFMT (not good)

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CASS CCD	DIRECT	SLITLESS		1/2			
20s								2	KK	RACK in HOME POS'N (MIRROR REMOVED) unguided images	
300s								3		"	
120s								4			
300s								5			
300s											
300s											
300											
.1s								8		in focus (2760)	
.2s								8			
.2s								8		secondary focus now 3150	
.03			Backed up to Perseus ONLY!					8		focus 3150	
.03			(need to edit the headers)					8		in focus (2760)	
.1			+ rename from CC to CD					8		"	

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Date 1994 Dec 22/23 Observers Smt {Vys} ([Hlw])

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Seeing
CCD 29159/60	COMP / STELLAR	HARTMANN				$0^h 12^m$ W	$+36° 19'$	FeNe clear	20/30		
61	BIAS x4			00 54							
62	COMP							"	30		
63	Vys 9 HD36395	05 26 18	-3 41	01 06 57		$1^h 41^m$ W			900	3296	
64	COMP							"	30		
65	BIAS x4			01 24							
66	COMP							"	30		
67	Vys 467 AC+16 777-164	05 36 15	+15 17 17	01 32 04		$2^h 03^m$ W			1400	552	
68	COMP							"	30		
69	COMP							"	"		
70	Vys 560 BD-2 3000	corrected for proper motion 09 48 10	-03 13 04	02 06 12		$1^h 32^m$ E			1520	552	
71	COMP							"	30		
72	BIAS x4			02 34							
73-77	FLAT x5					$1^h 30$ E	$-3° 40'$	Tung ~~Ap~~ Ap	4		
78/79	COMP / STELLAR	HARTMANN				0^h	$+40°$	FeNe clear	20/30		

CCD Spectr. Temp.
Focus
Spectr. Temp.

CCD ~~Spectr.~~ Temp. ...-100°C... Dome Temp./Hum. +2.1°C/74.1% Transparency Conditions ...clear., humid.....124.

Focus .....6.90..... NE FAN ON bright moon.

Spectr. Temp. ..... Dome Temp./Hum. +1.8°C/74.7% @END

412 0 50 1024 4 1 CCDFMT

Comparison Exp	Exp. Mtr.	Seeing	V ~~Pg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality max AVO
20/30					CASS CCD	1800 l/mm HH=47.9°	306μ	5307Å	3/4	FOCUS TEST		
									1/2			
30									5			
900	3296		V 7.97	M1					6	Marcy Standard.	some SBIG guiding	2.4K
30									7			
									1/2			
30									8			
1400	552		10.61	M0					9	{U4S}	some SBIG guiding	300 above b/g
30									10			
"									11			
1520	842		10.54	M0					12	{U4S}/Hlw	Killer background. <15° from Moon. Oh well.	100 above b/g
30									13			
									1/2			
4				Backed up to	WORM	& Perseus			14			13.5K →12.9K
30K									3/4	FOCUS TEST		

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Date 1994 Dec 26/27 Observers K.m. / Tu

Emulsion Batches:

CSS 386 9 seconds Ahead of W.W.V. Time

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Spectr. Temp / Focus / Spectr. Temp	Exp. Mtr
CC 241 80/81	Comp / Stelar Hartman				*GG385 Filter used			FeAr no Aperture	60/60		
82	BIAS(4)				For stellar beam. Perhaps only marginally needed,			OG 560 Filter For Comps			
83	Comp							FeAr ~~clear~~	60s		
84	HD 223094	23 41 23	28 08 54	17 56 55		00 21 W			4/4	2300	
85	Comp										
CG40 652 – 55	HD 223094	for Seeing Test as well as			GG385 Filter still in for seeing frames,			4x	67 ms		
56 – 57	"	encoder normalization (3 BIRDS with one setup)				00 31 W		2x	133 ms		
86	BIAS(4)										
87	Comp							FeAr Ap clear	60s		
88	AC +58 20564	03 08 25	+57 48 08	18 25 56		2 22 E			1508	400	
89	Comp							FeAr Ap Clear	60s		
90	AC +58 20564	03 08 25	+57 48 08	18 54 05		1 55 E			1424	361	
91	Comp							FeAr Ap Clear	60s		
92	BIAS (4)										
93	Comp							FeAr Ap Clear	60,		

Spectr. Temp. ....-101.5°C.... Dome Temp./Hum. +3°C....70.0% Transparency Conditions ...Slight haze, thin cloud..

Focus ...6.93.....

Spectr. Temp. ..... Dome Temp./Hum. .....

Note Scattered light mask out from Cass hole used since Dec 21 CASSORET work

385 0 50 1024 4 1 CCDFMT

Exp. Mtr.	Seeing	Pr. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no Filter For Exposimeter				CASS CCD	1200 l/mm 40.1° Tilt	306μ	6563Å	3/4			MAX ADU
								1/2			
								5			
2300		7.45	~~15~~ III					6	Stellel		6.6K
								7			
	1"-2"							—	SEEING TEST	NE FAIR only one on now very light East breeze	
								—			
								1/2			
								8c.	no obvious Hα emission	SOUTH one 1st ≥100/1 S/N	
≈ 400	1"-2"	10.0	MO	Yes, an obvious "M" type nice separation of Pair	MAYBE The slightly Brighter of Pair			9c	Vys pgm	Yes, indeed a close N S pair	1.3K
								10		MAX FOR Comps	4.4K
361	1"-2"	10.4	MO					11	Hα Vys pgm	NORTH of Pair	1.3K
								12			
								1/2			
								13			

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Pg#2

Date 1994 Dec. 26/27 Observers [K.m] T.n Hdy Stecking

Emulsion Batches:
GG 385 filter for Stellar
OG 560 filter for Comparison

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc29194	AC +45130-216	03 02 48	+45 21 19	19 26 55		1 25 E			843
95	Comp							FeAr Ap clear	60sec
96	Comp							"	"
97	Vys 419C	03 18 20	+23 25 09	19 50 12		00 59 E			1876
98	Comp							FeAr Ap clear	60s
99	AC +23 368-59	03 18 13	+23 25 51	20 24 52		00 50 E			270
cc29200	Comp						Ap	FeAr clear	60s
201	BIAS(4)			20 34 51					
202						+9° Dec			
→ 206	FLATS x 5					00 00	GG 385 Filter	TUNG Ap 1/4	3sec
207/08	Comp / Stellar	Hartman				" "	"	FeAr clear	60/80

CCD
Spectr. Temp.
Focus ... 6.9
Spectr. Temp

Exp Mtr	Seec
360	1
280	4
50	1
T = +4.39	

~~Spectr.~~ CCD Temp. −99.9°C Dome Temp./Hum. +1.2°C 78% Transparency Conditions slight Haze - Fog

Focus 6.93

Fast Low thick cloud -> Fog From Lake ontario coming MAX

Spectr. Temp. Dome Temp./Hum. +1.3°C 84% central ∂

Exp. Mtr.	Seeing	~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
360	1"	10.2	MO	CASSCCD	1200 l/mm 42.1°	306μ	6563Å	14	Vgs pgm	No obvious Hα emission Fld clear cut nicely	1.3K
								15			
								16			
280	<1"	11.89	M					17	Vgs pgm	No obvious Hα emission increasing cloud (not so bad) (70/1 S/N)	
								18			
50	1"	10.47	MO					19	Vgs pgm	solid cloud 25/1 S/N	
		~~10.47~~	~~MO~~					20			
								~~19~~ 1/2			
								21/c			13K
T = +6.3°C								22/23	focus test		
						All to Perseus : warm					

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pg#1

Date 1994 Dec 27/28 Observers Km./Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC 29209	BIAS(4)								
210	comp								
211	HD 20902	03 17 12	+49 30	22 01 04					30
212	"	0		22 02 32		00 47 W		no clear aperture	25
213	comp							Fe/Ne	20
214	comp							FeNe	20
215	HD 21389	03 21 54	58 32 00	22 08 29		00 52 W			268
216	~~Comp~~ "			22 14 31		00 58 W			330
217	comp							FeNe	20
218	comp							FeNe	20
219	HD 32630	04 59 30	41 13 51	22 ~~25~~ 27 ~~28~~ 59		-00 28 E			60 ~~40~~
220	"	"	"			-00 27 E			60
221 ~~220~~	comp							FeNe ~~Fe~~	20
222	comp							FeNe ~~Fe~~	20
223	HD 30652	04 44 24	06 47 00	22 36 38		00 03 E			95
224	"								102

CCD
Spectr. Temp.
Focus ... 7.0
Spectr. Temp.

Exp Mtr	Sec
BG34 Filter	
6000	
6000	
5000	3
6000	
~~5700~~ ~~5800~~	
5500	
5800	

CCD ~~Spectr.~~ Temp. ...-101.5°C... Dome Temp./Hum. +1.3°C ...81%... Transparency Conditions ...Part. Cloudy... 130

Focus ....7.04.....

Spectr. Temp. ..... Dome Temp./Hum. .....

c L4MBOH 394 0 50 1024 4 1 CCDFMT MHX ADY

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
BG39 Filter				CASS CCD	600 l/mm Tilt=~~[illegible]~~° 24.6°	230u	3800Å	1/2	way off on	Dec 29/30.	
								3			
6000		1.79	F5Ib		39.0° not a choice (option) for 600C grating.			4			max 11.7K
6000								5			max 11.7K
								6			
								7			
5000	3"-4"	4.54	A0Ia					8			max 7.2K
6000								9			max 7.0K
								10			
								11			
5700 ~~[illegible]~~		3.17	B3V					12			max 14.4K
5500								13			max 12.5K
								14		Comp	12K
								15			
5600		3.19	F6V					16			10K
5800								17			8.4K

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Date 1954 Dec. 27/25 ... Observers ... K.n../Tn .....

Emulsion Batches:
.....
.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
225	comp							[illegible]	20
226	comp							[illegible]	20
227	HD 34085	05 09 44	-08 19 01	22 51 05					8sec
228	"			22 51 58		00 13 E			8
229	Comp								
230	bias4			22 57					
231	comp							FeNe Clear	20
232	HD 36512	05 27 06	-07 22 31	23 00 45		00 17 E			297
233				23 06 49		00 05 E			653
234	comp							FeNe Clear	20
235	comp							"	"
236	HD 37128	05 31 08	-01 15 57	23 22 35					28
237	"			23 24 20					
238	Comp							FeNe Clear	20
239	comp								20

Spectr. Temp. ...
Focus 7.0
Spectr. Temp.

Exp Mtr	Seeing
603° F.R.	
25K	
26K	
7352	4"
3800	
4100	

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ..Hazy ... to p.cor.T. cloudy...

Focus ....7.04.....

Spectr. Temp. ..... Dome Temp./Hum. .....

MAX ADD

Comparison Exp.	Exp. Mtr.	Seeing	~~Pg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
20	BG39 Filter					600 lm ~~370°~~ TiH	250μ	3800Å				
20			~~0.12~~	~~B8Ia~~		24.6°			~~18~~			
8	25K		0.12	B8Iq					18			
8	26K		"	"					20			13.5K
									21			
									1/2			
20									22			
20	4852	4"	4.62	B0V					23			10K
653	3800								24		Thick cloud,	6.6K
20									25			
17									26			
28	4000		1.70	B0I					27		thin cloud	8.7
									28		thick cloud	~~13K~~ 12.5K
20									29			
20									29			

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Pg #3

Date 1994 Dec. 27/28 Observers K.m./J.T.

Emulsion Batches:

Spectr. Temp.
Focus 704
CCD Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr 6639	Seeing
240	HD 36673	05 28 19	-17 53 38	23 30 35	—				350	5100	
241	"			23 37 48					190	5200	
242	Comp							FeNe	20		
243	Comp							FeNe clear	20		
244	HD 53138	06 58 51	-23 41 13	234602		00 00 E			410	4200	5"
245	"			23 53 43		00 53 E			435	440	
246	Comp							FeNe clear	20s		
247	Comp										
248	HD54605	07 04 20	-26 14 04	00 06 27		00 37 E			993	5380	
249	Comp	"	"	~~00 23 15~~				FeNe Clear	20		
250	BIAS(4)										
251											
→ 270	FLATS x20	using Repeat FLATN.BAT				00 29E	-9°	TUNG clear	115		
271/72	Comp / Stellar	HARTMAN				00 29E	+11 18	FeNe Clear	20/40		4005

Spectr. Temp. ..... Dome Temp./Hum. 10.4°c ... 82.7% Transparency Conditions ... Cloudy ... a bit 134

Then Lots of it.

Focus ... 7.04 .....

~~Spectr~~ CCD Temp. ..... Dome Temp./Hum. 10.5°c ... 85.5% H

Comparison Exp.	Exp. Mtr. BG 39	Seeing	Rtg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
350	5100		2.58	F0 Ib		600 l/mm ~~[illegible]~~	230.	3800Å	3			10K
190	5200					24.6°			4			5K
20									6			
20									7			
410	4200	5"	3.02	B3 I					8			5.2K.
435	5400								9			7K
20s									10			
									11			
993	5360		1.84	F8 Ia					12		in & out of thick cloud	3.0K
20									13			
									1/2			
115									14			14.6
20/20		+00.5°	7.04 set						15/16	focus	Right on @ Row 450	
					All to Perseus &				WRM.			

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Date 1994 Dec. 29/30 Observers Km./Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC 29273/4	COMP/STELLAR	HARTMANN						FeNe clear	20/40
75	BIAS(4)			18 19					
76	COMP							FeNe clear	20
77	HD206165	21 35 14 ~~18 37 50~~	+61 37 51	18 27 50		3 11 W			330
78	COMP							"	20
79	HD206165			18 37 54		3 26 W			650
80	COMP							"	20
81	COMP							"	20
82	HD214680	22 34 47	38 31 47	19 00 53		2 41 W			270
83	COMP							"	20
84	BIAS(4)			19 08					
85	COMP								20
86	HD6130	00h 57m.4	+60° 32'	19 16 53		00 47 W			1100
87	COMP								
88	COMP								
89	HD6903	01h 04m.5	+19° 7'	19 44 54		1 04 W			800

Spectr. Temp. -100.4°C Dome Temp./Hum. 50.6%/-7.9°C Transparency Conditions clear, dry 136

Focus 7.14, set cal. purposely.

Spectr. Temp. 90 again Dome Temp./Hum.

FANS OFF
(HOT PIXEL @ COLUMN 24)
430 0 50 1024 4 1 CCDFMT

Exp. Mtr. FILTER	Seeing	V ~~Pig.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality max ADU
					200C 24.6° tilt	230μ	3800 Å	3/4	FOCUS TEST	@ -7.4°C T dropping quickly.	
								1/2			
								3			
5000	6'-7" -8"	V 4.73	B2I					5	MK		2.8K
								6			
10150								5	MK		5.5K
								6			
								7		Before this comp. OOPS Hartmann mask in	Stellar
5000	7'-8"	4.88	O9V					8		focused for a little bit.	7.8K
								9			
								1/2			
								10			
5345		V 5.92	F0II					11			6.7K
								12			
								13			
5400	~7"	5.55	G0III					14			5.6K

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Date 1994 Dec 29/30 Observers Km/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc29290	COMP			~~20 04~~				FeNe clear	20
91	BIAS(4)			20 04					
92	COMP							"	20
93	HD10761	01 40 06	+08 39	20 12 02		0 47 W			260
94	COMP							"	20
95	COMP							"	20
96	HD13611	02 07 42	+8 23	20 25 19		0 32 W			236
97	COMP							"	20
98	COMP							"	"
99	HD17918	02 47 36	+16 05	20 39 27		0 22 W			1200
cc29300	COMP							"	20
01	BIAS(4)			21 01					
02	COMP							"	20
03	HD 20630	03 14 07	03 00 13	21 06 32		0 10 W			400
04	COMP								

CCD ~~Spectr~~. Temp. -100°C Dome Temp./Hum. -8.8°C/52.1% Transparency Conditions little hazy 138

Focus 7.14

Spectr. Temp. Dome Temp./Hum.

430 0 50 1024 4 1 CCDEMT

Exp. Mtr. BG 39 FILTER	Seeing	~~Ptg.~~ Mag.	Sp.	Inst. CASS CCD	Grating/ Tilt	Slit	Emulsion	~~P.H.~~ C.	Program	Remarks	Quality
				600 C 24.6° tilt →		230μ	3800 Å	15			
								½			
								16			
5600	8"	4.26	G8III					17	MK		3.9K
								18			
								19			
5000	6"	4.37	G6II-III CN-2					20	MK		4.4K
								21			
								22			
4770	varied 3"-6"	6.31	F3III					23	MK		5.3K
								24			
								½			
								25			
5180	-5"	4.83	G5V					26	MK		5.4K
								27			

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Date 1994 Dec. 29/30 Observers Km/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	
CC29305	COMP							Fe Ne clear	20	
06	HD23180	03 38 00	+31 58 00	21 21 20		0^h 4 E			180	2400
07	COMP							"	20	
08	COMP							"	"	
09	HD26015	04 02 00	+14 54 00	21 30 38		00 9 E			1200	6020
10	COMP							"	20	
11	COMP							"	20	
12	HD27383	04 14.2	+16 15	21 58 17		00 09 W			900	2100
13	COMP								20	
14	BIAS (4)			22 15						
15	COMP									
16	HD 27397	04 14.3	+13° 48'	22 21 49		?			900	6730
17	COMP								20	
18	COMP								20	
19	HD30652	04 44 24	+6 47	22 44		?			109	7000

CCD ~~Spectr.~~ Temp. -100.3°C Dome Temp./Hum. -9.4°C / 53.1% Transparency Conditions The ol' fine 140

Focus 7.14

Spectr. Temp. ..... Dome Temp./Hum. .....

Comparison Exp.	Exp. Mtr. FILTER	Seeing	✓ ~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20					CASS CCD	600C	230μ	3800Å	28			
180	8400		3.83	B1 III					29	MK		14.2K
20									30			
"									31			
120	6020		6.01	F3 V					5			7.5K
20									6			
20									7			
900	2100		6.89	F7 V + G3 V					8		DOME Block LIGHTWAY	2.6K
20									9			
									1/2			
									10			
900	6730		5.59	F0 IV					11			8.5K
20									12			
20									13			
109	7000		3.19	F6 V					14			~~12K~~ 7K

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Date 1994 Dec 29/30 Observers Km/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC29320	COMP							FeNe clear	20
21	COMP							"	"
22	HD27022	04 11 18	+64 54	22 58 53		1 6 W			700
23	COMP							"	20
24	BIAS(4)			23 13					—
25	COMP							"	20
26	HD36512	05 27 06	-07 23	23 20 47		0 9 W			259
27	COMP							"	20
28	COMP							"	"
29	HD37018	05 30 24	-04 54	23 35 28		0 21 W			260
30	COMP							"	20
31	COMP							"	20
32	HD 41117	05 57 59	20 08 27	23 49 41		6 7 W		"	320
33	COMP							"	20
34	COMP							"	"

CCD ~~Spectr.~~ Temp. -10.4°C Dome Temp./Hum. -10.0°C/53.6% Transparency Conditions Amazing for December! 142

Focus 7.14

Spectr. Temp. ..... Dome Temp./Hum. .....

Panson ed Exp.	Exp. Mtr. FILTER	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20					CASS CCD	600 C 24.6° tilt	230μ	3800 Å	15			
"									16			
200	6370		5.27	G5 III b					17			6K
20									18			
—									½			
20									19			
259	6350	~4"	4.62	B0 V					20			10.8K
20									21			
"									22			
240	6280		4.59	B1 V					23			12K
20									24			
20									25			
320	6500		4.63	B2 I					26			8.6K
20									27			
"									28			

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Date 1994 Dec 29/30 Observers Km/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC29335	HD 47839	06 35 30	09 59 00	00 01 23		0019 E			240
36	COMP								
37	BIAS 4			00 09					
38	COMP								
39	HD54605	07 04 18	-26 14 00	00 21 56		00 28 E			75
40	COMP								
41	COMP								
42	HD 62345	07 38 25	24 38 16	00 40 54		?			277
43	COMP								
44	COMP								
45	HD 62509	07 39 12	28 16 04	00 51 35		0 36 E			40
46	COMP								
47	COMP								
48	HD58350	07 20 06	-29 06	00 59 53		0 6 E			70
49	HD58350	"	"	01 04 33		?			170

Spectr. Temp. ..... Dome Temp./Hum. -10.7°C/55.2% Transparency Conditions ... clear ..... 144.

Focus ..... 7.14 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Comparison Set Exp.	B6 39 Exp. Mtr. FILTER	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
240	6050		4.66	O7					29			9K
									30			
									31/2			
									3~~6~~			
75 ~~4~~	10500 ~~6100~~		1.84	F8 Ia					5			4.3K
									6			
									7			
277 ~~126~~	11400 ~~7000~~		3.57	G8 III					8			7.7 ~~5.8K~~
									9			
									10			
40	15000		1.14	K0 III					11			13.2K
									12			
									13			
10	5900		2.45	B5 I					14			4.5K
170	15000								14			12.3K

p. 6145

Date 1994 Dec. 29/30 Observers Km / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc 29350	COMP							FeNe Clear	20
51	BIAS(4)			01 11					–
52	COMP							"	20
53	HD 74395	8 38 48	−6 52	01 20 16		0 51 E			905
54	COMP							"	20
55	COMP							"	"
56	HD 39801	5 49 48	+07 23	01 47 20		2 10 W			94
57	COMP							"	20
58	COMP							"	"
59	HD 77912	9 00 12	+38 51	01 56 28		0 43 E			641
60	COMP							"	20
61	BIAS(4)								–
62	COMP							"	20
63	HD 82210	9 25 36	+70 16	02 19 43		0 52 E			380
64	COMP							"	20

CCD ~~Spectr.~~ Temp. −100°C ..... Dome Temp./Hum. −10.7°C / 56.7% Transparency Conditions ... clear ; increasing cloud 146

Focus ..... 7.14 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Comparison Exp.	Exp. Mtr. FILTER (RG 39)	Seeing	~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20					CASS CCD	600 C tilt 24.6°	230μ	3800Å	15			
-									½			
20									16			
905	14300		4.62	G1Ib					17			10.3K
20	~~14.5K~~								18		exp. mtr made weird bleeping noise before counting normally	14.5K
"									19			
94	50 000	5"	0.50	M2I					20			10K
20									21			14.7K
.									22			
1641	10 000	~7"	4.56	G7 Ib-II					23		~~cloudy here~~	6.6K
20									24			
-									½			
20									25			
380	270	?	4.56	G4III-IV					26		in cloud. → sky attacked from NW by thick cloud front.	
20									27			

P7 147

Date 1994 Dec. 29/30. Observers Km/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	(s)Exp.
CC29365→73	FLAT × 9					0^h	$-15°$	Tung Clear	11
74/5	COMP/STELLAR HARTMANN					0^h	$+38°$	FeNe clear	20/40
76	BIAS(4)			0310					

Spectr. Temp. ..... Dome Temp./Hum. -10.9°C/55.4% Transparency Conditions ... overcast except extreme S.

Focus ..... 7.14 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

148

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CLO	600 ℓ/mm (C) tilt=24.6°	230μ	3800Å	2c;			15.4K →13.9K
								3/4	FOCUS TEST	-10.0°C in dome -10.9°C @ close set warm now.	

Backed up to Perseus & WORM.

149 pg#1 Mon/Tues

Date 1995 Jan 2/3 Observers [R.m.] S.m.t. / Tq

Emulsion Batches:

CSS = 14 secs ahead of (Astro clock)

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC2937 77/78	Comp / Stellar	HARTMAN	Posn					FeAr Clear	60/60
79	BIAS(4)	Telescope	Encoders	also normalized	using	1900 coords of	HD3765		
80	Comp							"	60
81	HD3765	00 35 18	+39 40	18 12 56		0 18 W			882
82	COMP							"	60
CG400 658 661	HD3765	00 35 18	+39 40	18 32				4x	67ms
CG 662 663	"	"	"			0 25 W		2x	133ms
CC29383	Comp							FeAr Clear	60s
84	HD203156	21 15 23	+37 49	18 42 44		4 05 W			628
85	Comp							FeAr Clear	60s
86	BIAS(4)								
87	Comp							FeAr Clear	60s
88	HD214975	22 36 55	+56 18 24	19 02 30		3 28 W			2122
89	Comp							FeAr Clear	60s
90	BIAS(4)								

CCD Spectr. Temp. ...-100°C..... Dome Temp./Hum. ...-4.6°C....62.9%H Transparency Conditions . PART. CLEAR.....

Focus ....6.90.....

CCD Spectr. Temp. ...-100.9°C..... Dome Temp./Hum. ...-6.8°C...71.5%H

CCDFMT 424 0 50 1024 4 1

150

Comparison Filter	Comparison Exp.	Exp. Mtr. (OG 560 FILTER)	Seeing	Ptg. ✓ / Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality (max ADU)
	60/60					CASS CCD	1800 l/mm TiH 54.95°	306μ	6400Å	3/4	Focus test	Hot pixel at column 25	
										1/2			
	60									5			
	882	2280	3'-4"	7.36	dK5					6	Std. Vel.		3400
	60									7c.			
	87m			7.36	dK5		above 306μ s.lit				Seeing test	Dome West, gusty	
	133m										* weather Radio SAY gusty SW winds	N W wind (I thought)	
	60s									8			
	625	4300	3'-5"	5.8 - 5.9	F2					9	Rm pgm	> 300/1 S/N	6.6K
	68									10			
										1/2			
	85									11			
	2122	3240	4"	8.40	G0Ib					12	Rm pgm		
	03									13			
										1/2c.			

151
pg #2 Mon / Tues

Date 1995 JAN 2/3 Observers [Rm] Tn / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC 29391	Comp							FeAr Clear	60sec
92	~~V8~~ Y Per	02 20 18.8	+58 28.06	19 48 02		0 13 W			127
93	Comp							FeAr Clear	60s
94 → 402	FLATS x 9					00 16W	+58°	Tung Ap 1/4	6s
403	BIAS(4)								
404/05	Comp / Stellar HARTMAN					00 40 W	+5°	FeAr Clear	60/60
06	COMP							"	60
07	HD 44990	06 19 48	+07 08	01 30 00		01 44 W			420
08	COMP							"	60
09	BIAS(4)			01 41					—

Spectr. Temp.
Focus ... 6.90
Spectr. Temp.

Exp Mtr	Sec
CS 566 Filter	
130	4
-6.3°C	
2260	

~~Spectr.~~ CCD Temp. −100.8°C ..... Dome Temp./Hum. −6.8°C ... 71.76% Transparency Conditions ... Some cloud .....

Focus ... 6.90 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
OG 560 Fo Her				CASS CCD	1800 l/mm Tilt 54.95	306u	6400Å	14		S/N ~50/1	
130	4"-3"	10.8 -11.6	F5 -F9					15	Rm pgm	VY Per (A Bit too Faint for this seeing And Cloud)	
								16			
								17		closed.	12.5K
								1/2			
−6.3°C	6.90 set							18/19	focus test		
								20		opened up during a hole in clouds.	
2260		B 6.5-8.0	F-Tab -K1 Tab					21	T Mon Rm	GUSTY WIND.	3.6K
								22			
								1/2		BLOWING SNOW.	

Backed up to Perseus & WORM

pg#1 153 Tues/Wed

Date 1995 JAN 3/4 Observers [Bln] Tu / Sunt

Emulsion Batches:

CCD Spectr. Temp. Focus 6.93 Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Sec
CC294 10/11	Comp / Stellar Hubinan					00 29W	40°	FeAr Clear	60/60	CC560 Filter	
CG40 64-67	HD 3765	00 35 18	+39 40	18 40		0 30 W		4x	67ms		
CG 68 69	"	"	"					2x	133ms		
CC294 12	Comp							FeAr Clear	60s		
13	HD 3765	00 35 18	+39 40	18 47 11		0 50 W			500	995	3
14	Comp							FeAr Clear	60s		
15	BIAS(4)			18 59							
16	Comp							FeAr Clear	60s		
17	HD 6457	01 00 20	+20 55 43	19 05 19		00 55 W			1195	4700	3
18	Comp							FeAr Clear	60sec		
19	Comp							"	"		
20	HDE 235679	21 55 00	+54 00 00	19 32 36		4 41 W			1901	00k	2'3"
21	Comp							FeAr Clear	60s		
22	BIAS(4)			20 09					—		
23	COMP							"	60		

CCD Spectr. Temp. −100° after clearing saturation Dome Temp./Hum. −6.0°C 65.2% H Transparency Conditions Part Cloudy

Focus 6.93

Found CCD saturated slightly at start of night. Raised Temp to −50°, running cise for 20 mins.

Spectr. Temp. ..... Dome Temp./Hum. ..... c Lumbda

[424 0 50 1024 4 1 CCD FLAT Exact Orion centering]

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
OG560 FILTER		7		CASS CCD	1800 l/mm G=6070	306u	* 6604Å	3/4	Focus Test	* Actual Row 512λ=6609Å center	max 400
		7.36	dK5		4 Bove	306u slit			Seeing test	Part Cloudy	
					"	"	"		" "	No Funs tonight.	
								5			
995	3"	7.36	dK5					6	Std Vel	thin cloud	2.2K
								7			
								8		CSS 386 time reset to NW. It was 15 sec ahead.	
4700	3"	5.56	A0 Vn					9	Telluric Std	mostly Cloudy though 1.09 AIR MASS South of Pair	7.7K
								10	1st 15 mins	almost completely Cloudy	
								11			
1006	2"-3"	8.86	B2.5 Ib					12	Bln pgm	1.33 AIR MASS Clear Now	6.1K @ Hα 1.7K @ continuum
								13		headers? Done	
								1/2			
								14			

Pg #2 | SS

Date 1995 Jan. 3/4 Observers [Bln]/Tn/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC29424	HD19832	03 06 18	+26 53	20 19 23		0 07 E			600
25	COMP							FeAr clear	60
26	COMP							"	"
27	HD35502	05 20 00	-02 54	20 40 24		1 49 E			1200
28	COMP							"	60
29	BIAS(4)			21 03					—
30	COMP							"	60
31	HD19832	03 06 18	+26 53	21 11 27		0 45 W			630
32	COMP							"	60
33	COMP							"	60
34	HD37017	05 30 24	-04 34	21 29 03		1 15 E			900
35	COMP							"	60
36	COMP							"	60
37	HD37776	05 35 54	-01 32	21 51 49		0 55 E			1099
38	COMP							"	60
39	BIAS(4)			22 12					

Spectr. Temp.
Focus 6
Spectr. Temp

Spectr. Temp. -100°C Dome Temp./Hum. -7.2°C/65.4% Transparency Conditions clear now 156

Focus 6.93

Spectr. Temp. ..... Dome Temp./Hum. .....

Comparison Exp.	Exp. Mtr. FILTER	Seeing	~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
600	3820	4"-5"	✓ 5.79	B8 (Si)	CASS CCD	1800 l/mm G=6070	30μm	(6669 Freq. cut) 6609 Å	15	Bln He-weak	seeing worsening	6.3K
60									16			
"									17			
1200	1300	4"-5" ~8" at times	✓ 7.36	B5 V sn (He W)					18	Bln He-weak	bit of Hα emission in wings of absorption	1.7K
60									19			
-									1/2			
60									20			
630	4150	5"	✓ 5.79	B8 (Si)					21	Bln He-weak	seeing better again	
60									22			
60									23			
900	2420		✓ 6.56	B2 V p					24	Bln He-rich	S/N > 200:1	3.5K
60									25			
60									26			
1099	1885	3"-5"	✓ 6.97	B2 V					27	Bln He-rich*	S/N > 200:1 some cloud	3.2K
60									28			
									1/2			

pg 43 157

Date 1995 JAN 3/4 Observers [B/h.] Th. / Smt.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC29440	Comp							FeAr Clear	60sec
41	HD19832	03 06 18	+26 53	22 18 20		01 51 W			564
42	Comp							FeAr Clear	60s
43	Comp							"	"
44	HD6457	01 00 20	+20 43	22 33 48		04 16 W			714
45	Comp							FeAr Clear	60s
46	Comp							?	"
47	HD37017	05 30 24	-04 34	22 54 30		00 09 W			835
48	Comp							FeAr Clear	60s
49	BIAS(4)			23 10					
50	Comp							FeAr Clear	60s
51	HD19832	03 06 18	+26 53	23 16 24		02 50 W			557
52	Comp							FeAr Clear	60s
53	COMP								
54	HD35502	05 20 00	-02 54	23 34 04		1 07 W			1345

CCD ~~Spectr~~. Temp. −100.1°C Dome Temp./Hum. −8.0°C 66% Transparency Conditions Part. Cloudy 1.58

Focus 6.93

Spectr. Temp. ..... Dome Temp./Hum. .....

Comparison Exp.	Exp. Mtr.	Seeing	Pix Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
60sec	06566 Filter				CASS CCD	1800 l/mm G=6070	306u	6604Å	5			
5.4	3850	3"	5.79	B8 (Si)					6	Bln He weak	1.12 Air mass	
60s									7			
"									8			
7.4	4000	4"	5.56	A0Vn					9	(Telluric Std	SOME Cloud Air mass = 1.72	
60s									10	Again, The	South one of pair)	
"									11			
835	2200	"	6.56	B2Vp					12	Bln He Rich	1.50 Air mass Cloud too	
60s									13			
									1/2			
60s									14			
557	3975	3"-4"	5.79.	B8 (Si)					15	Bln He weak	1.25 Air mass	1.0K
60s									16			
									17			
1345	2120		7.36	B5IVsn (He W)					18			3.2K

pg #4 159

Date 1995 Jan 3/4 Observers [Bln]/Tn/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	(s) Exp.
CC29455	COMP							FeAr clear	60
56	BIAS(4)				≈ 00 00				
57	Comp							FeAr clear	60s
58	HD 37017	05 30 24	-04 34	00 04 27		01 16 W			601
59	Comp							FeAr clear	60s
60	Comp							"	"
61	HD 19832	03 06 18	+26 53	00 21 40		3 55 W			580
62	Comp							FeAr clear	60s
63	COMP							"	"
64	HD 37776	05 35 54	-01 32	00 39 33		1 50 W			900
65	COMP							"	60
66	BIAS(4)			00 59					—
67	COMP							"	60
68	HD37017	05 30 24	-04 34	01 02 47		2 13 W			570
69	COMP								

Spectr. Temp. -100°C ..... Dome Temp./Hum. -8.4°C / 69.9% Transparency Conditions variable cloud, mostly clear most of the time. 160

Focus ..... 6.93 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

MAXADC

Comparison Det. (s) Exp.	CG 560 Exp. Mtr. FILTER	Seeing	Avg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
60					CASS CCD	1800 ℓ/mm G=6070	306μ	6604 Å (6609 actually)	19			
									1/2			
60s		~~4"~~	~~6.56~~	~~B2Vp~~					20	~~Bln He Rich~~		
601	2060	4"	6.56	B2Vp					21	Bln He Rich	qnty.	3.0K
60s									22			
4									23			
580	4570	4"5"	5.79	B8 (Si)					24	Bln He wk	~~qnty~~	7.5K
60s									25			
4									26			
900	2200		V 6.97	B2V					27	Bln	emission? no sky here. odd Hα region (very nasty cosmic RAY) strong s g lancing covers ~100 pixels total, crosses spectrum diagonally.	4.4K
160									28			
–									1/2			
60									29			
570	2020		6.56	B2Vp					30	Bln	~~* odd Hα region~~	3.4K
									31			

pg#5 161

Date 1995 Jan. 31/4 .... Observers [Blu]/Tu/Smt/...+..[Wde]

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC29470	Comp							FeAr Clear	60s
71	HD 18832	03 06 18	+26 53 00	01 20 10		4 54 W			600
72	Comp							FeAr Clear	60s
73	Comp							"	"
74	HD 35502	05 20.	-02 54	01 39 06		3 13 W			1350
75	Comp							FeAr Clear	60s
76	BIAS(4)			01 02 07					
77	Comp							FeAr Clear	60s
78	HD 37017	05 30 24	-04 34 00	02 09 57		3 23 W			708
79	Comp							FeAr Clear	60s
80-99	FLATS x 20					00 00	+18°	TUNG Ap 1/4	6
CC29500/01	Comp / Stellar HARTMAN					"	"	FeAr Clear	60/65
CC29502/03	Comp / Stellar HARTMAN							FeAr Clear	40/70
04	BIAS(4)			03 03					
05	COMP							"	60

Spectr. Temp. ..... Dome Temp./Hum. −9.3°C 67.0%H Transparency Conditions ... slight Haze ... 162

Focus ... 6.93 / 7.05 for 4475Å wind getting gusty again

Spectr. Temp. ..... Dome Temp./Hum. −9.6°C 66.8%A

Comparison Exp.	Exp. Mtr. FILTER	Seeing	Pig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
60s					CASS CCD	1800 ln/mm G=6070	306μ	6604Å	5			
600	4490		5.79	B8 (Si)					6c	Bln He weak		6.5K
60s									7			
"									8			
1350	7240	3"-5"	✓ 7.36	B1Vsn					9	Bln He weak	2.22 Air mass	30K
60s									10			
									11			
60s									12	Bln He Rich	2.38 Air mass	
768	2160	2"-4"	6.56	B2Vp					13			~~[illegible]~~
60s									14			14.0K → 13.5K
6									3/4	focus test		
60/65	−9.5°C		6.93 set									
41/70	1639 FILTER −9.5°C					1800 ln/mm G=4555	306μ	* 4475Å	3/4	focus test	4470Å actual center	
									1/2			
60									5			

pg# 6163

Date 1995 Jan 3/4 Observers [Wde]/Tn/Smt + [Bln]

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC29506	HD42111	06 03 48	+02 31	03 09 00		3 59 W			1330
07	COMP							Feathr clear	60
08	Comp							"	"
09	Vesta	J2000 06 02	+21 43	03 38 36		4 35 W			1292
10	Comp							Feathr Clear	60
11	BH4S(4)			~04 00					—
12	Comp							"	60
13	HD88195	10 05 09	-07 55 01	04 09 14		0 51 W			886
14	COMP							"	60
15	COMP							"	"
16	HD86360	09 52 48	+12 55	04 32 21		1 21 W			600
17	COMP							"	60
18	COMP							"	"
19	HD77190	08 55 54	+28 18	04 51 39		2 44 W			1000
20	COMP							"	60

Spectr. Temp. -102°C Dome Temp./Hum. -9.8°C/66.8% Transparency Conditions clear, gusty W wind 144

Focus 7.05

CCD FIMT for 4475Å Region

Spectr. Temp. Dome Temp./Hum. 430 0 50 1024 4 1

Comparison Exp.	Exp. Mtr. (66 39 FILTER)	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality (max 400)
1330	11830	4"-5"	5.73	A3Vn	CASS CCD	1800 l/mm G=4555	306μ	4475 Å	6	Wide A-shell		4.9K
60									7			
"									8			
1242	5008	2"-4"	6.8	G2					9	Std Vel		2K
60									10			
—									1/2			
60									11			
886	9170	3"-4"	5.91	A1V					12	Wide A-shell	S/N > 250:1	
60									13			
"									14			
600	13900		5.26	B9IV					15	Bln Spec Bin.	S/N > 370:1 windy again.	7.2K
60									16			
"									17			
1050	10650		6.07	A8Vn					18	Wide A-shell	S/N ~ 260:1	5.5K
60									19			

pg # 7165

Date 1995 Jan 3/4 Observers [Wde/Bln] Tn/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC29521	BIAS(4)			05 12					
22	COMP							Fe Ar Clear	60
23	HD98058	11 11 36	-03 06	05 17 18		0 42 W			265
24	COMP							"	60
CG40 670	HD103095	11 47 13	+38 26 10	0537				4x	67 sec
CG40 674 675	"	"	"			0022 W		2x	133 sec
CC29525	Comp							Fe Ar Clear	60
26	HD103095	11 47 13	+38 26 10	05 42 11		0044 W			1084
27	Comp							"	60
28	BIAS(4)			06 04					—
29	COMP							"	60
30	HD112028	12 48 24	+83 57	06 10 32		0 07 W			600
31	COMP							"	60
32	COMP							"	"
33	HD118232	13 30 24	+49 32	06 32 05		0 21 E			240

Spectr. Temp. ..... Dome Temp./Hum. -10.8°C / 67.0% Transparency Conditions clear, gusty wind 166

Focus 7.05

Spectr. Temp. ..... Dome Temp./Hum. -11.2°C / 66.8% H

Exp. Mtr.	Seeing	~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG39				CASS CCD	1800 l/mm G=4555	30μ	4475i (4470 actually)	½			
								20			
10 500	3"	4.47	A7IIn					21	Wide A-shell	S/N ~ 270:1	5.2K
								22			
	3"	~~6.45~~	G8Vp		ABOVE 30μ slit			—	Seeing Test	Dome West, strong W wind 82° Alt. 1.008 Air mass, -11.1°C stable humidity most of night 67% dome.	
								—	"		
								23			
7340	2"	6.45	G8Vp					24	Std Vel		
								25			
								½			
								26			
12 300		5.28	A1 III Shell					27	Bln/Wide A-shell.	S/N ~ 320:1	10.0K
								28			
								29			
9950	3"	4.70	A5V					30	Wide A-shell	S/N ~ 290:1	5.8K

Pg # 8

Date 1995 Jan 3/4 Observers [Wde] Tn / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC29534	COMP							Fe/Ar clear	60
35	Comp							"	"
36	HD108283	12 21 24	+27 49 00	06 44 09		01 00 W			275
37	Comp							Fe/Ar clear	65
38	Comp							"	"
39	HD138629	15 28 12	+41 14	06 56 24		01 53 W			290
40	COMP							"	60
41	BIAS(4)			07 03					—
42	COMP							"	60
43	HD148283	16 21 54	+37 37	07 07 53		2 31 E			440
44	COMP							"	60
45-53	FLAT x 9					2 30 E	+38°	Tung clear	13
54/55	Comp / Stellar Hartman					"	"	Fe/Ar clear	40/70

CCO
Spectr. Temp.
Focus
Spectr. Temp

Exp Mtr	Sec
2830	2
8400	2
5700	

CCD ~~Spectr.~~ Temp. -101.9°C Dome Temp./Hum. -11.2°C / 66.8% Transparency Conditions clear, windy 168

Focus 7.05

Spectr. Temp. Dome Temp./Hum. -11.3°C 67.6% H

Exp. Mtr.	Seeing	Pl. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 l/mm G=4555 "	306μ	4475 Å (4470 Å actually) "	31			
								5			
8030	2"-3"	4.95	F0p					6	Wide A shell		3.8K
								7			
								8			
8400	2"	5.02	A5 V					9	Wide A shell		4.0K
								10			
								1/2			
								11			
8300		5.52	A5 V					12	Wide A-shell	bright morning sky. S/N > 220:1	4.0K
								13			
								14			13.0K → 11.8K
								3/4	focus test		
				All to	WORM	ε	Perseus.				

169 Wed / Thurs

Date 1995 Jan 4/5 Observers [Rm] Tm / Sept

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC295 56/57	Comp / Stellar	Hartman				00 11W	38°28	Fe Ar Clear	60/60
58	BIAS(4)								—
59	COMP							"	60
60	HD180583	19 12 00	+27 45	1759 26		(PLATFORM) 05 26 W			261
61	COMP							"	60
62	BIAS(4)								—
63-65	FLAT x 3			18 09		05 26 W	+27°55	Tung ¼ Apo	6s
66-71	FLAT x 6			1947		"	"		
72	BIAS(4)			1952					

CCD
~~Spectr.~~ Temp. -100.5°C Dome Temp./Hum. -10.0°C 59%H Transparency Conditions. Part. cloudy 170
→ Snow frequently

Focus 6.95

Spectr. Temp. ..... Dome Temp./Hum. ..... 424 0 50 1024 4 1 CCDFMT

Comparison Filter Exp.	Exp. Mtr. FILTER	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
60/60	-10.2	6.95			CASSCCD	1800 l/mm G=5905	306μ	6392 Å	3/4	focus test	6392 Å actual	
—									1/2			
60									5			
241	500		(V) 6.19	F6 I -IIb					6	Rm V473 Lyr	Aperture (primary) partly blocked by dome (platerow)	500 above background
160									7			
—									1/2			
60s									8			13.0K → 12.6K
									9			20.6K
									1/2	All to WORM Tu & Perseus		

171
pg #1 THURS / FRI

Date 1995 JAN. 5/6 ..... Observers [Rm.] .. Scot. / Tn. .....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC295 73/74	Comp / Stellar Hartman					00 20W	+40°	Feathr clear	60/60
75	BIAS(4)								
76	Comp							Feathr clear	60s
77	HD 180583	19 12 00	+27 45 00	17 39 15		05 18 W			698
78	Comp							Feathr clear	60s
79	COMP							"	"
80	HD 331970	20 08 27	+32 34 16	17 58 38		5 04 W			2043
81	COMP							"	60
82	BIAS(4)			18 35					
83	COMP							"	60
84	HD 203156	21 15 24	+37 49	18 40 50		4 17 W			711
85	COMP							"	60
86	COMP							"	"
87	HD 214975	22 36 55	+56 18 24	18 00 15		3 33 W			1800
88	Comp							"	60
89	BIAS (4)			19 35					

CCD Spectr. Temp. −100°C Dome Temp./Hum. −8.2°C 47.8%H Transparency Conditions FINE 172 pg #1

Focus 6.75

Spectr. Temp. Dome Temp./Hum. 424

Strong WSW wind very gusty too (SW 40 to 50 kms/hour)

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
06560 Filter				CASSCCD	1800 l/mm G=5905	306u	6392Å	3/4	focus test		
								1/2			
								5			
5000	3"-7"	6.19	FGJ-IIb		S/N > 300:1		easy.	6	Rm V473 Lyr pgm	PARTIALLY BLOCKED BY DOME AT END.	7.3K
								7			
								8			
1000	3"-10"	9.1-9.8	F8-62Ib		S/N > 100:1			9	Rm MW Cyg	S/N > 100:1	
								10			
								1/2			
								11			
4900	3"-10"	5.8-5.9	F2		S/N > 350:1			12	Rm V1334 Cyg	wind caused variable seeing	9.0K
								13			
								14			
1370	4"-8"	8.4	G0 Ib		S/N > 170:1			14	Rm Z Lac		
								15			

pg #2173

Date 1995 Jan 5/6 Observers [Rm] Tn / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC29590	Comp							FeAr clear	60s
91	VY Per	02 20 19	+58 28 03	19 38 04		00 32 W			2297
92	Comp							FeAr clear	60s
93	VY Per			20 18 40		1 15 W			2400
94	Comp							FeAr clear	60s
95	BIAS (4)			21 06					
96	COMP							"	60
97	HD25361	03 56 42	+58 23	21 09 37		0 08 W			1199
98	COMP							"	60
99	COMP							"	60
CC29600	HD29587	04 34 30	+41 57	21 41 54	21 52				600
01	COMP							"	60
CG40676-9	HD29587	"	"						4x.067s
80 81	"	"	"		21 58	0^h	88° Alt.		2x.133s
CC29602	BIAS(4)			22 01					

Spectr. Temp.
Focus 6.95
Spectr. Temp

Spectr. Temp. ..... Dome Temp./Hum. -8.7°C 50.8% H Transparency Conditions ... slightly hazy ... 174

Focus .. 6.95 .....

Spectr. Temp. ..... Dome Temp./Hum. -8.6°C 50.4% H

C LAMBDA

pg #2

Spanson Exp.	Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
60s					CASS CCD	1800 l/mm G=5905	306	6392Å	16			
2297	333	3"-5"	10.8 -11.66	F5 -F9					17	Rm pgm	S/N ~ 70:1 above blg.	
60s									18		s	
2400	336								19	Rm pgm	S/N ~ 70:1 above blg.	400 above blg
60									20			
									½			
60									21			
1199	3000	3"-B"	7.30 -8.07	F6Ib -G2Ib					22	Rm RX Gem	wind taking over again.	6.1K
60									23			
60									24			
600	1600	3"-5"	7.29	d62					25	Std. Vel.		
60									26			
4,2,3	2,7,179 2,5,153		"	"					–	SETTING TEST	Done w, STRONG SW wind gusts. 40-50 km/h. above 30km, stable T (-8.6°C) and humidity (50% dome).	
21,32	200,163								–			
									1/2			

175 pg 43

Date 1995 Jan 5/6 Observers [Rin] Tu / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC 29 603	Comp							FeAr Clear	60s
04	HD 30282	04 41 05	+36 32 36	22 11 54		0 28 W			1200
05	Comp							FeAr Clear	60s
06	COMP							"	"
07	HD44990	06 19 48	+07 08	22 43 24		0 43 E			900
08	COMP							"	60
09	BIAS(4)			23 05					—
10	COMP							"	60
11	VESTA	J 2000.0 06 00 00	+21 48 00	23 15 02		~0 10 W			900
12	COMP							"	60
13 - 21	FLAT x 9					0 29 W	+21 48	Tung ¼ Ap.	6 s
22/23	COMP/STELLAR HARTMANN							FeAr Clear	40/70
24	COMP							FeAr Clear	60
CC 29 616 25	VESTA	J 2000.0 06 00 00	+21 48 00	23 57 47		01 03 W			1261
26	COMP							"	60
27	BIAS(4)			0021					

Spectr. Temp. −102°C Dome Temp./Hum. −8.4°C / 49.9% Transparency Conditions fine, GUSTY, STRONG SW WIND.

Focus 6.95 / 7.03 @ 4470 Å

Spectr. Temp. ..... Dome Temp./Hum. −8.1°C / 49.4% @ FOCUS TEST

176

Exp. Mtr. (OG 560 FILTER)	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				C455 CCD	1800 l/mm G 5905	306μ	6392Å	5			
	3"-5"	7.9-8.8	F6 - G1					6	AW Per Run pgm	Double peaked spectrum due to wind shaking telescope	4K
								7			
								8			
4700	4"-5"	6.5-8.0	FTIab - KITab					9	Run T MON		9.0K
								10			
								1/2			
								11			
~3600		~7	G2					~~12~~	STD. VEL.	Δα = −0010, Δδ = −0054	7.3K
								13			
								15			13.1K →12.3K
−8.1°C	7.03 SET				1800 l/mm G=4555	30μm	4470Å	3/4	FOCUS TEST	4470Å exact wavelength at center.	
OG 560 FILTER				Grating Angle 42.7°				5			
4380	5"	~7	G2			Slit starting		12	STD. VEL	exp. mtr. filter changed during obs. WIND IS NUTS!	
BG 39 FILTER								7			
								1/2			

177
pg#4

Thurs / Fri

Date 1995 Jan. 5/6 ..... Observers [Blu/Wde] ... Tu / Swat

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc29628	Comp							FeAr Clear	60sec
29 ✓	HD86360	09 52 48	+12 55 00	00 29 40		2 32 E			747
30	Comp							FeAr Clear	60sec
31 32	Comp							"	"
32	HD77190	08 55 51	+28 17 48	00 51 43		1 13 E			774
33	Comp							FeAr Clear	60s
34	Comp							"	"
35	HD188195	10 05 06	-07 55 00	01 14 43		1 55 E			960
36	Comp							FeAr Clear	60sec
37	Comp							"	"
38	HD98058	11 11 35	-03 06 18	01 36 46		2 49 E			
39	Comp							FeAr Clear	60sec
40	BIAS(4)			01 46					
41	Comp							FeAr Clear	60s
42	HD108283	12 21 24	+27 49 00	01 52 28		3 43 E			403
43	Comp							FeAr Clear	60s

Spectr. Temp. ..... Dome Temp./Hum. −84°C ..... 49.9% Transparency Conditions slightly hazy 178

Focus 7.03 ..... * Hot Pixel & Col #24 now no clouds though STILL very gusty SW

Spectr. Temp. ..... Dome Temp./Hum. ..... 430 050 1024 4 1 CCD FMT 30-60 kms/hr

Comparison Exp.	Exp. Mtr. (B6 39 FILTER)	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
60sec					CHSS CCD	1800 l/mm G-4655	306u	4470A	8			MAX ADU
747	15155	3-4"	B 5.22	B9IV					9	Bln SBn pgm		7.2K
60sec	~~1578~~								10			
"									11			
77u	8500	3-8"	V 6.07	A8Vn					12	wide A shell		4.3K
60s									13			
"									15			
960	8460	3-5"	B 5.93	A1V					14	wide H shell	> 200/1 S/N	
60sec									16			
"									16			
	11,100	6"	B 4.68	A7IVn					17	wide A shell		3.9K
60sec									18			
									1/2			
160		~~3-6"~~							18			
403	10,400	3-6"	B 5.27	F0p					19	wide A shell pgm		5.5
60s												

179 pg #5

Date 1995. JAN. 5/6..... Observers [W.de/Bln]...T.A./.Smt.

Emulsion Batches:

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Spectr. Temp.

Focus 7.0

Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	See
CC29644	Comp							Felt Clear	60s	8639	
45	HD 112028	12 48 24	+83 57	02 08 11		3 45 E			800	17300	
46	Comp							Felt Clear	60s		
47	COMP							"	"		
48	Ceres	J2000.0 09 42 44	+26 04 00	02 33 02		0 07 W			1890	5460	
49	COMP							"	60		
50	BIAS(4)			03 08					—		
51	COMP							"	60		
52	HD118232	13 30 22	+49 32	03 17 31		3 27 E			300	14500	
53	COMP							"	60		
54	Comp							"	"		
55	HD 103095	11 47 12	+ 38 26	03 30 47		1 17 E			1242	8692	3"
56	Comp							"	60s		
CG40E 82–85	HD 103095	"	"	03 56		1 11 E	75° AH.	4x	67ms		3"
CG40 86–87	"	"	"					2x	133m		
CC29657	BIAS (4)			0401							

Spectr. Temp. ..... Dome Temp./Hum. -8.2°C 50.6% Transparency Conditions Fine 180

Focus 7.03 ..... increasing Cloud

Spectr. Temp. ..... Dome Temp./Hum. -8.0°C 50.7%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
~~6560~~ BG39					1800 l/mm G4555	306μ	4470A	21			
17300	~~[illegible]~~	B 5.31	A0	S/N	~ 380:1			22	Wide/Bk Shell pgm	South one	9.0K
								23			
								24			
5460 ~~[illegible]~~		~1 ~~[illegible]~~	G2	S/N	~ 190:1			25	Std Vel.	Δα = -0.09 Δδ = -0.054	2.5K
								26			
								½			
								26			
14500		4.70	A5 V					27	Wide A-shell		10.0K
								28			
								29			
7698	3"	6.45	G8 V p					30	Std vel		3.3K
								5			
	3"	6.45	G8 V p						Seeing strong	Dome SE wind	

181
99 6

Date 1995 Jan 5/6 Observers [Wade] Tg / Sat

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC29658	Comp							FeAr Clear	60
59	HD138629	15 28 12	+41 14 00	04 07 43		4 15 E			140
60	Comp							FeAr Clear	60s
61	Comp							"	"
62	HD148283	16 21 50	+37 37 18	04 38 04		4 49 E			821
63	Comp							FeAr Clear	60s
64	HD148283	16 21 50	+37 37 18	04 55 35		4 22 E			1373
65	Comp							FeAr Clear	60s
66	BIAS (4)								
67	Comp							FeAr Clear	60s
68	HD102870	11 45 30	+2 20	05 27 59		00 25 W			150
69	Comp							FeAr Clear	60
70 — 78	FLATS x 9					00 32 W	+1° 46	Tung Clear	13s
79	BIAS (4)			05 51					
80/81	Comp / Stellar Hartman					00 01 W	+38	FeAr Clear	40/70

CCD
~~Spectr.~~ Temp. −101.9°C Dome Temp./Hum. ..... Transparency Conditions Thin – medium Cloud 182

Focus 7.03

Spectr. Temp. ..... Dome Temp./Hum. −6.8°C 66%H wind finally dying out

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					1800l/mm G4555	306u	4470Å	~~7~~			
9130	3"6"	B 5.09	A5V					9	wide Shell pgm		
								10			
								11			
~~[illegible]~~	2"3"	V 5.52	A5V					12	wide Shell pgm	(cloudy at start) and at end.	≈ 400 ADU
								13			
2745	2"3"	V 5.52	A5V					14	wide Shell pgm	cloud again	1.4K
								15			
								1/2			
								16			
10000	2"	V 3.61	F9V					17	Stellel		5.3K
								18			
								18			12.7K 12.2K
								1/2			
								3/4	All to Worm & Perseus		

183
pg #1 SAT / SUN

Date 1995. Jan. 7/8..... Observers [B/H] / T.H.....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC296 82/83	Comp inbound / Stellar outbound		HARTMAN	Positions		00	+40°	Feathr Clear	40/70
84	BIAS (4)								
85	Comp							Feathr Clear	60s
86	HD 3765	00 35 18	+39 40	17 51 53		00 19 W			964
87	Comp							Feathr Clear	60s
CG40 688 691	HD 3765	00 35 18	+39 40					4x	67 ms
CG40 692 693	"	"	"			00 21 W		2x	133 ms
CC296 88	Comp							Feathr Clear	60s
89	HD 37017	05 30 24	-4 34	18 19 13		3 55 E			180
90	Comp							Feathr Clear	60s
91	BIAS (4)			18 52					
92	Comp							Feathr Clear	60s
93	HD 21364	03 21 42	+9 23 00	18 56 27		1 35 E			28
94	Comp							Feathr Clear	60s
95	Comp							"	"

CCD Spectr. Temp. -100°C Dome Temp./Hum. -6.0°C 70% H Transparency Conditions Fine 184

Focus 7.00

Spectr. Temp. Dome Temp./Hum. Central Lambda

CCD FMT 430 0 50 1024 4 1 S/N

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG39 Filter	[no spectrograph change from previous night] (except focus)			CASSCCD	1800 lnl/mm G=4555	306u	4470Å	3/4	Focus Test		
								1/2			
								5			
1350	4"-5"	✓ 7.36	dK5					6	Std Vel	Also Telescope encoder normalization 80/1 S/N	80/1
								7			
	POOR	✓ 7.36	dK5		above	306u	slit		Seeing Test Light North wind	Same STAR, Dome West South West No FANS Tonight. Early Dome opening	
								8			
4000	8"-10"	B 6.42	B7 V p					9	He Rich; Bln		170/1
								10			
								1/2	CCDT = -100.1°C		
								11			
16,650	5"	B 3.66	B8p					13	SB Bln	MAX 12.2K ADU	> 300/1
								12			
								14			

185 pg#2 SAT / Sun

Date 1995 Jan 7/8 Observers [B/n]. Ta

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC29696	HD37017	05 3024	-4 34	19 0840		306 E			
97	Comp							Feth Clear	60s
98	Comp							"	"
99	HD 37468	05 3342	-02 3900	19 4548		257 E			
CC29700	Comp							Feth Clear	60
01	ADS 4241D	053342	-02 3912	19 5557		2 38 E			829
02	Comp							Feth Clear	60s
03	BIAS (4)			20					
04	Comp							Feth Clear	60s
05	HD 37017	05 3024	-4 34	20 19 27		1 58 E			1597
06	Comp							Feth Clear	60s
07	Comp							"	"
08	HD 112028	12 4824	+83 57	20 55 32		8 44 E			1156
09	Comp — Wrong. It is a bias — Lu. Same one as 7							Feth Clear	60s
10	BIAS (4)			21 17		(Same Time)			

Spectr. Temp.
Focus ... 7.00
Spectr. Temp.

Exp. Mtr	Sec
5639 5,500	5
12,190	8
3,40	6
5,00	9
7,00	5

Spectr. Temp. ..... Dome Temp./Hum. -8.9°C 71.7%H Transparency Conditions Slightly hazy 186 estimated S/N

Focus 7.00

Spectr. Temp. ..... Dome Temp./Hum. -11.0°C 74.4%H

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG39 5,500	6"	6.42	B2V p	CASS CCD	1800 l/m @ 4555	306u	4470A	15	He Rich Bln		200/1
								16			
								17			
12,400	8"	B 3.57	O9.5V					18	ORI AB	Bln pgm	260/1
								19			
3640	6"	B 6.3	B2V					20	ADS 4241 D	Guided Far left on screen To avoid AB	>100/1
								21		AB would be at lower	
								1/2		COLumn ¼ from "D" IF showing at all	
								22			
5,600	8"	6.42	B2V p					23	He Rich Bln		
								24			
								25			
12000	5"	5.2	A0 Shell					26	Bln/wide Shell	(Brighter and South of Pair) M/K	4.4K ADU
								27			
								1/2			

187
pg#3 SAT / SUN

Date 1995 JAN 7/8 Observers [Bln/Wde] Jn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC29711	Comp							FeAr Clear	60s
12	HD37017	05 3024	-0434	21 2622		00 55E			1350
13	Comp							FeAr Clear	60
14									
→ 22	FLATS x 9						-431	TUNG Clear	15s
23									
24	Comp / Stellar HUMTMAN					0045E	-431	FeAr Clear	40/70
25	Comp							FeAr Clear	60s
26	HD37017	05 3024	-434	22 1051		00 11E			1317
27	Comp							FeAr Clear	60s
28	BIAS(4)			22 3507					
29	Comp							FeAr Clear	60s
30	HD22484	03 3148	+000500	22 4118		02 00W			236
31	Comp							FeAr Clear	60s
32	Comp							"	4
33	HD42111	06 0348	+023100	22 5105		00 14E			736
34	Comp							FeAr Clear	60s
35	BIAS(4)			2306					

CCD
Spectr. Temp
Focus ... 7.00
Spectr. Temp.

Exp Mtr	Sec
6326	5
-11.34	
6380	4
6450	4
3320	3

~~Spectr.~~ CCD Temp. −100.3°C Dome Temp./Hum. −11.2°C 73.9%H Transparency Conditions Slight Haze no Cloud though S/N above ~~Background~~

Focus 7.00

Spectr. Temp. Dome Temp./Hum. −12.0°C 78.0%H a lambda

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CASS CCD	1800 l/m G=4555	306μ	4470A	28			
6326	5-3"	6.42	B2V p					29	He Rich Bln	seeing improving	> 200/1
								30			
								31		MAX 10μ 15.9K-14.6K	
−11.3°C 7.00 set								3/4	focus Test	Still in focus but can't go much lower without changing it to colder Temp	
								5			
6380	4"	6.42	B2V p					6	He Rich Bln		~~200/1~~
								7			
								1/2			
								8			
6450	4'6"	V 4.28	F9 IV-V					9	Std vel	7.4K MAX	200/1
								10			
								11			
7300	3'5"	B 5.80	A3V n					12	wide A shell pgm	3.4K ADU MAX	
								14			
								1/2			

189
pg#4

SAT/SUN

Date 1995 Jan. 7/8 Observers [Bln/Wde] TG

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC29736	Comp							FeAr Clear	60s
37	HD 37017	05 3024	-4 3400	23 1027		00 49 W			1333
38	Comp							FeAr Clear	60s
39	Comp							"	60s
40	ADS 4241 D	05 3342	-2 3912	23 4121		W			432
41	Comp							FeAr Clear	60s
42	HD 37468	05 3342	-02 3900	23 5345		01 16 W			561
43	Comp							FeAr Clear	60s
44	BIAS(4)			00 04					
45/46	Comp / Stellar	Hartman		01 34		0 0	+28°	FeAr Clear	40/70
47	BIAS(4)			01 46					

Spectr. Temp
Focus 7.6
Spectr. Temp

Exp. Mtr	Sc
6520	4
2100	* 3
5200	3
-10.8°C	

Spectr. Temp. ..... Dome Temp./Hum. −11.8°C ... 76.2%H Transparency Conditions ... Slight haze 190

Focus ... 7.00 ..... −12.6 before closing dome

~~Spectr.~~ CCD Temp. ... −100.3°C ... Dome Temp./Hum. −10.8°C after dome closed 40 min Cloudy

Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
60s					CASS CCD	1800 l/mm G4555	306μ	4470Å	15			
1333	6 500	4"	642	B2Vp					15	He Rich Bkg		
60s												
60s									16			
432	21000	* 3.4"	6.3	B2V					18	ADS 4741 Bkg	* better separation guided @ left end of slit view.	
60s									17			
561	5,200	3.4"	B 3.57	O9.5V					22	σ ORI NB	in cloud	
60s									~~12~~			
									1/2			
40/70	−10.8°C, but probably ≈ −11-12°C for spectrograph by now,								33/34	focus	3 tests tonight may show the "Temp Lag" effect,	
									1/2			
										Now it's a bit too cool for		
											this set. (Lag caught up now.)	
					All to Perseus & warm							

191

sun mon

Date 1995 Jan 8/9 Observers T. Test for Bin.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr
CC297 48/49	Comp/Stellar Hartman					1 12W	-5 17	FeNe Clear	50/70	6.39 Filter
50	BIAS									
51	Comp							FeNe Clear	* 40sec	6-sec, [illegible]
52	LAMP TL850			20 1224	2101	1 12W	-5 17		2900	8200
53	Comp							FeNe Clear	40sec	"
54	LAMP TL830			21 0529	2159					8870
55	Comp							FeNe Clear	40s	
56	LAMP TL830			22 0133	2250				2900	7780
57	Comp							FeNe Clear	40s	
58 - 60	FLATS x 3							TUNG Clear	90sec	
61	LAMP TL850			23 0854	2339				1600	6280
62	"			23 3916					1884	5916
63	BIAS(4)									
64	Comp							FeNe Clear	40s	
65	LAMP TL850			00 1242					1856	6030
66	Comp							FeNe Clear	40s	

CCD Spectr. Temp.
Focus ... 7.0
Spectr. Temp

CCD ~~Spectr.~~ Temp. -100°C ..... Dome Temp./Hum. -5.3°C .. 74% Transparency Conditions .. Cloudy (snow a bit)

Focus ... 7.00 ..... 90C GAIN - Lamp Pairs placed on catwalk [Dome closed Tests] 192

Spectr. Temp. ..... Dome Temp./Hum. ..... UNDER Telescope. ADU MAX

C LAMBDA 430 0 50 1024 4 1 CCDFMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG 39 Filter				CASS CCD	1800 ln/mm Tilt 38.2°	306	* ≈ 3670Å	3/4	Focus Test	* must check exact λ ID	
								1/2			
60 secs saturates one line								5		FLORESCENT Light PAIRS	12K
8200			Sources in Double fixture placed at West end of Platform as far					6	TL80 F32T8/TL830 Lamp		1K
"			From dome interior as possible at top of stairs.					7			
8870			Dome in normal Rest Position.					8	TL80 F32T8/TL830 LAMP		
			[No Houselights or Stair Lights on of course]					9		Dome T +5.6°C	
7780								10		CCD T @ 22 EST = -100.4°C	
								11		Dome T @ 23 EST = -5.9°C	
								12			11.7K
6280			≈ 50 ADU/min					13		Dome T @ 00 EST = -6.1 The bluest looking of 3	39
5916								14		[SAME 3 lines as TL830 And a wakea if cing thing]	
								1/2	CCDT = -100.3°C		
								15			
6030								14	Last of 3	(TL850 LAMPS)	
								16			

193
pg #2

Date 1995 JAN 8/9 Observers [Bh] TG Lamp Tests

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC29767	LAMP TL 841			00 51 02		01 12 W	-05:17		3944
68	Comp							FeNe clear	40s
69	Lamp TL 841			01 59 44					3960
70	Comp							FeNe clear	40s
71	BIAS(4)								
72	Lamp TL 841			03 08 49					4120
73	Comp							FeNe clear	40s
74	BIAS(4)								

Spectr. Temp. ..... Dome Temp./Hum. -62°C 74.7% H Transparency Conditions ...mostly cloudy..... 194

Focus ...700.....

Spectr. Temp. ..... Dome Temp./Hum. -67°C 73.9% H

c Lambda

ADU MAX

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG39 12,200				CASS CCD	1800 l/mm T:1H 38.2°	306μm	3670Å	17c;	Lamp Test	for Bln	
								18c:			
11,344								17c;		Dome T = -63°C CCD T -100.3°C	980
								18c:		Dome T = -65°C	
								1/2			
11,000								17c;			
								18			
								1/2		CCD T = -100.4 °C	

195
pg#1 Mon/Tues

Date 1995 Jan 9/10 Observers [Bln] Tn

Emulsion Batches:

CSS Time Reset to AER WWV Time

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC2477/76	Inbound/outbound Comp/Stellar	HERTMAN						Fe Ar Clear	40/70
77	BIAS(4)	(done after HD3765)							
78	Comp							Fe Ar Clear	60s
79	HD 3765	00 40 34	+40 09 48	18 17 30		00 52 W			947
80	Comp							Fe Ar Clear	60s
CG406 94/97	HD 3765	00 40 34	+40 09 48			00 53 W	+40 10	4x	67ms
CG406 98/99	"							2x	137ms
CC297 81	Comp							Fe Ar Clear	60s
82	HD 37017	05 30 24	-43 40 00	18 46 00		3 20 E			1726
83	Comp							Fe Ar Clear	60s
84	Comp							"	"
85	HD 21364	03 21 42	+9 23 00	19 27 43		1 02 E			222
86	Comp							Fe Ar Clear	60s
87	BIAS(4)			≈ 1932					
88	Comp							Fe Ar Clear	60s

Spectr. Temp. (c)
Focus 7.00
Spectr. Temp.

Exp Mtr	Seeing
-6.6°C	
1659 Fe Ar before	
1800	3'4
5714	3'5
1800	3'4

CCD Spectr. Temp. −100°C Dome Temp./Hum. −6.5°C 67.5%H Transparency Conditions Partially clear improving 196

Focus 7.00

Spectr. Temp. Dome Temp./Hum. −8.0°C 71.6%H C LAMBDA 4 30 0 50 1024 4 1 CCDFMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
−6.6°C				C455 CCD	1800 l/mm G=4555 42.7°	30μ	4470Å	3/4	focus test		
BG39 Filter Before Exp Mtr								1/2			
								5			
1800	3"-4"	✓ 7.36	dK5					6	Std Vel and Encoder Reparmalization		
								7			
		✓ 7.36	dK5		Above	30μ Slit			Seeing Test	Dome west, Clear now Light west wind	
								8			
5764	3"-5"	B 6.42	B2 V p					9	He Rich Bln		
								9c	but star written though		
								10			
16,000	3"-4"	3.66	B6p					11	SB Bln		mHx 8K
								12			
								1/2			
								13			

197
pg#2 Mon / Tues

Date 1995 Jan. 9/10 ..... Observers [Blu / Wade] ... Tu .....

Emulsion Batches: .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC 29789	HD 22484	3 31 48	+00 05	19 35 48		00 57 E			294
90	Comp							FeAr Clear	60s
91	Comp							"	"
92	HD 37017	05 30 24	-4 34	19 47 50		02 24 E			
93	Comp							FeAr Clear	60s
94	Comp							"	"
95	HD 112028	12 48 24	+83 57	20 20 40		09 12 E			1095
96	Comp							FeAr Clear	60s
97	BIAS (4)			20 41 34					
98	Comp							FeAr Clear	60s
99	HD 37017	05 30 24	-4 34	20 49 05		01 21 E			1563
CC 29800	Comp							FeAr Clear	60
01 — 09	FLATS x 9					01 15 E	-4 30	Tung Clear	15s
10/11	Comp / Stellar Hartman			21		01 08 E	"	FeAr Clear	40/70
12	BIAS (4)			21 34					

Spectr. Temp.
Focus ... 7.6
Cap Spectr. Temp.

Exp. Mtr. Reg.	Secs
7930	37
5000	37
4300	48
6500	36
-97	

Spectr. Temp. ..... Dome Temp./Hum. -7.9°C 71.6%H Transparency Conditions Slightly hazy, no cloud now

Focus 7.00

CCD Spectr. Temp. — °C Dome Temp./Hum. -9.6°C 71.7%H

CCD FMT FOR 4470Å OBS 198 ADU MAX
430 0 50 1024 4 1

Exp. Mtr. RG39	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
8930	3"	V 4.28	F9 IV-V	C455 CCD	1800l/mm G4555 4270°	306	4470Å	14	Std vel		3.7
								15			
								16			
6000	3-5"	B 6.42	B2V p					17	He Rich Bkn	200/1 S/N	
								18			
								19			
11,300	4-8"	B 5.2	A0 shell					20	Bkn/wide A shell	Southern of Pair	
								21			
								1/2c		CCD T = -100.4°C	
								22			
6300	3-6"	B 6.42	B2V p					23	He Rich Bkn		
								24		~~max~~ 15.5K	
								25		15.5K max	
-9.7	7.00 SET							3/4c.	focus;	Right on for center	
								1/2			

199
pg# 3 Mon/Tues

Date 1995 Jan 9/10 ..... Observers [Bly/Wade] Tu ..... Km present now.

Emulsion Batches:
.....
.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC29813	Comp							FeAr Clear	60s
14	HD37017	05 30 24	-04 34	21 40 13		00 33 E			1369
15	Comp							FeAr Clear	60s
16	Comp							"	"
17	HD37468	05 33 42	-02 39	22 09 23		00 26 E			238
18	Comp							FeAr Clear	60s
19	HDS42410	05 33 42	-02 39 12	22 16 57		00 14 E			576
20	Comp							FeAr Clear	60s
21	BIAS(4)			23 10					
22	Comp							FeAr Clear	60s
23	HD37017	05 30 24	-04 34	23 12 57		01 00 W			1367
24	Comp							FeAr Clear	60s
25	Comp							"	"
26	HD42111	06 03 48	+02 31 00	23 42 54		00 47 W			815
27	Comp							FeAr Clear	60s
28	BIAS(4)			00					

CCD
Spectr. Temp
Focus ... 7.0
Spectr. Temp

Exp Mtr	Sec
1450	4
14500	4
1700	3
1350	3
3200	3

~~Spectr.~~ CCD Temp. -100.3°C Dome Temp./Hum. -9.7 71.8%/14 Transparency Conditions Part. Cloudy 200

Focus 7.00 increasing cloud

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CHS CCD	1800 l/mm G-4555	306	4470/14	26c.			
6080	4"6"	642	B2Vp					27	He Rich-Bln		
								28			
								29			MAX
14500	4"	357	O9.5V					6	σ-Ori AB	Bln pgm	6.1K
								7			
1700	5"4"	B 6.3	B3V					8	4054241D (Bln)	guided at High column to mask out AB	
								9	CCOT-1020	Some cloud here now At expand	
									Dome	open again	
								10			
6250	3"5"	642	B2Vp					11	He rich Bln	some cloud though	>200/1
								12			
								13			
8,200	3"4"	B 5.80	A3Vn					17	wide Shell pgm		37K
								112			

201 pg #4

Date 1995 Jan 9/10 Observers [Blindade] Jn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC29829	Comp							FeAr Clean	60s
30	HD37017	05 30 24	-4 34	00 03 38		01 49 W			1262
31	Comp							FeAr Clean	60s
~~CC29832~~	Comp / stellar	Lost stellar frame, (~~Bat~~ looked good)				00 01 W	+35 33	FeAr Clean	60/60
32	Comp			~~01 05 31~~		OG560 in Comp GG385 in Stellar	Feed ~~Fo~~ TRAY	FeAr Clean	60s
33	AC+47 256-150	07 15 58	+46 16 52	01 05 31		00 57 W			899
34	Comp							FeAr Clean	60s
35	BIAS(A)			01 25					
36	Comp							FeAr Clean	60s
37	AC+63 14097	07 25 17	63 09 16	01 30 37		01 16 W			1201
38	Comp							FeAr Clean	60s
39	Comp							"	"
40	AC+36 2886	08 22 03	35 21 00	01 58 58		00 49 W			1081
41	Comp							FeAr Clean	60s
42	BIAS(A)			02 25					

Spectr. Temp. ...../..... Dome Temp./Hum. -10.8°C 75.4%H Transparency Conditions ... Part. Cloudy ... 202

Focus ... 7.00 / 7.06 for 1200 l/mm — getting better again

CCD Spectr. Temp. -99.0°C ..... Dome Temp./Hum. -10.9°C 77.9%H — Then not so not literally

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 l/mm G 4555	306μ	4470Å	10c			
5819	3"	642	B7Ip				"	11c	He Rich Bkg	(cloud end)	
								12		Top up done Bay	
-10.6°C	7.06 set			CASS CCD	1200 l/mm G=4506 42.10°	306μ	6563Å	3/4	Focus Test	(385 0 50 1024 4 1 CCDFMT)	
							6574Å @ Row 512 Exact center	5			
355	2"-3"	✓ 10.5	M2					6	Vys Hα	search no Hα em	
								7			
								1/2			
								9			
460	2"	✓ 10.48	M0					8	Vys Hα	some cloud no Hα em	
								9			
								10			
360	2"	✓ 10.7	M0					11	Vys Hα	cloud @ end no Hα em	
								12			
								1/2			

203
1945

Date 1995 Jan. 9/10 Observers Km / I.T.

Emulsion Batches:
GG 385 Filter for Stellar's Flats
OG 560 Filter for Comparison

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC29843	Comp							FeAr Clear	60s
44	Vys 560 [BD-23000]	04 48 10	-031304	02 30 19		00 08 E			878
45	Comp							FeAr clear	60s
46 – 54	FLATS x 9		(OG560 replaced by GG 385 Filter)			00 39 E	+01°	Junc Ap 1/4	3s
55/56	* Inboard/Outboard. Comp / Stellar		HARTMAN		GG385 Filter in		"	FeAr Clear	60/60
57	Bias (4)								

* From this day forward, "COMP/STELLAR" HARTMANN MASK POSITIONS will be referred to as "INBOARD" for "COMP" and "OUTBOARD" for "STELLAR".

Spectr. Temp. ..... Dome Temp./Hum. -11.3°C 78.0% Transparency Conditions Cloud again 204

Focus 7.06

Spectr. Temp. ..... Dome Temp./Hum. -11.8°C 79%

5/4

Exp. Mtr.	Seeing	Fo. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1200 l/mm G=4500 42.9 TILT	306u	Hα	13			
300	2"-3"	10.54	MO					14	Vys Hα	(no Hα em) (Although not 5303Å) of interest to Hβ too	80/1
								15			
								2c;			13.6K
-11.6°C	set	7.06						3/4	focus	still good for slightly cooler if anything.	
								1/2			
					Hll to	warm c persens.					

205
PA #1 Mon / Tues

Date SAN/6/17 95 Observers [KK] TA / Sent

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE084 49 50	inbound / outbound			≈19 EST		≈2 W	≈30°		
51	BIAS(4)			220725					
CE08452	Comp							ThAr	15s
53	HD 34029	* 050918	note (used encoder BAT stop cut 1st time, and imported +455347	221238		00 37W			877
54	Comp							ThAr	15s
55	HD 34029	05 09 18	+45 53 47	22 2908		01 11 W			1889
56	Comp							ThAr	15s
57	BIAS(4)			2305					
58	HD 34029	050918	+455347	230631		0147 W			1807
59	Comp							ThAr	15s
60	BIAS(4)			0048				″	″
61	Comp			≈01				ThAr	15s
62	HD 47105	06 31 56	+16 29	010221		W			1572
63	Comp							ThAr	15s
64 - 68	FLATS x5					2 25W		Tung ~~Ge~~	200s
69	BIAS(4)			02 20					

CCD Spectr. Temp. −100°C ..... Dome Temp./Hum. 0°C 82% H At 22EST Transparency Conditions Mostly Cloudy 2C6

Focus .244 ..... very windy (NNW) wind

Spectr. Temp. ..... Dome Temp./Hum. −0.7°C 81% FULL moon @≈ +15° Decs 8hrs RA MAX AVM

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	× Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
0°C	.244 set			echelle CCD Tilt=17.80	1200ln/mm .4460	60u 400u 400u=.225 set 60u=.272 set	3960Å	1/2	focus test	CCD FMT 0 0 128 1024 81	
								1/2		CCD FMT 0 0 256 1024 41	
								3		Telescope encoders	
2797	* very poor	V 0.08	G5 III e +G0 III	* very hard to focus Telescope (ie cannot tell if image is focused)				4	KK Capella	normal on Capella program	≈1K
								5			
10,100								6	KK Capella	Thick cloud at end	3K
								3			
	× 5"	(Able to estimate seeing & focus Better in cloud)						1/2		CCD T = −100.4°C	
470	5"							4	KK Capella	Thick cloud, but visible on slit	
								5			
								1/2		CCD T = −100.5°C	
								3			
80	7"	B 1.9	A0 V					4	KK pgm 8 Gen	FULL moon <30° away	≈ 50AW ABOVE Backgrd
								3			
						W=60u H=700u		2			6.9K
								1/2			

207 Night #2

Date 1995 JAN 16/17 Observers [KK] Tn / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE08470	Comp							ThAr	15s
71	HD47105	06 31 56	+16 29	02 29 17		4 08 W			~~2857~~
72	Comp							ThAr	15s
73	BIAS(4)			03 20					
74	Comp			~~03~~				ThAr	15s
75	HD62509	07 39 12	+28 16 04	03 24 23		3 41 W			2036
76	Comp							ThAr	15s
~~77~~	~~COMP~~							"	"
77	BIAS(4) ~~HD56986~~	~~07 14 09~~	~~+22 10 00~~	04 15 ~~04 03 09~~		~~4 21 W~~			~~613~~
78	Comp	~~14 11 06~~	~~+19 42 11~~	~~04 22 36~~				ThAr	15s
79	HD124897	14 11 06	+19 42 11	04 22 36		2 03 E			1303
80	Comp							ThAr	15s

CCD Spectr. Temp. -102.0°C Dome Temp./Hum. -6.0°C 81.1% Transparency Conditions cleared quickly 208
cloudy in again fast

Focus 244

Spectr. Temp. ..... Dome Temp./Hum. -2°C 86% cloudy

Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	X Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
15s					echelle CCD	1200l/m	W=60μ H=400μ	3960Å	5			
2887 15s	1700	5"	1.9	A0 IV					4 3	KK pgm	γ Gem PART clear well, mostly cloudy * Most of Exposure in Last 15 mins	
									1/2			
15s									5			
2936 15s	1560	4"	V 1.14	K0 III b					6 3	Std vel	β Gem 30° from moon some cloud	
									5			
~~1175~~ 15s	~~48~~	~~5"~~	~~B 3.9~~	~~F0 IV~~					~~1/2~~ 3c?	~~KK pgm~~	nothing there. cloud suddenly back with a vengeance.	
1903 15s	314	2-3"	V 0	K1.5 III					4c. 5	Std vel		50 ADU above b/g.
						All to Perseus c work.						

209 pg #1

Tues / Wed

Date 1995 JAN 17/18 Observers [Bln] Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC 298 58/59	inboard / outboard	HARTMAN				01 05 W	+3 06	FeNe Clear	40/65
29860	BIAS(4)								
61	Comp					01 12 W	-20 48	FeNe Clear	50sec
62	LAMP TL830	(didn't Intend this long an exposure)		20 33 27		"	"		4319
63	Comp							FeNe Clear	60s
overdubbed 64	LAMP TL830			21 49 30					3669
65	BIAS(4)								
66	Comp							FeNe	50s
67	LAMP TL830			22 54 12					4357
68	Comp							FeNe	50s
69 – 71	FLATS x 3							TUNG Clear	60s
72	LAMP TL850			00 21 20					2003
73	Lamp TL850			00 55 34					2500
74	Lamp TL850			01 37 47					2269
75	Comp							FeNe Clear	50sec

CCD Spectr. Temp. −100°C Dome Temp./Hum. +00.2°C 85%H Transparency Conditions: Cloudy, Dome closed for Light Tests 210

Focus 6.9.8

Spectr. Temp. Dome Temp./Hum. +00.1°C 88%H 418 0 50 1024 4 1 CCDFMT MAX 40

Exp. Mtr. no filter	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
+00.3°C	6.98 Set			CASS CCD	1800 l/mm G=4175 Tilt=39.45°	306	3890Å	3/4c;	Focus Test	Exactly 3890Å & Row # 512 ± 1.5Å	ABOVE Background
								1/2c;			
Twin sources placed same location as on JAN 8/9								5cs		(continuum ~15ADU above Background)	
100k But Telescope pointing closer to Bright area on Dome.								6c		~~Start test Stared only one week~~	80
No house lights and "Exit" sign covered. (with black cloth)								7c;		~~time: 8ADU above background~~ In ~~3 mins of exposure~~ →	
84,200								8c;		Dome T = +00.2°C	
								1/2		Dome T = +00.1°C	
								9c;			
99.5K								8c;			
								10c;			
								11		Dome T = +00.1°C	12.2K
57,000								12	Continuum ±3ADU above	Strongest only 25ADU above Background.	
63,000								13c;			
56,300								14c;			
								14ci			

211
pg #2

Date 1995 JAN 17/18 ..... Observers [B/n] ... Tu .....

Emulsion Batches:
.....
..... A .....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc29876	BIAS(4)					01:12.10 W	-20 47 48		
77	LAMP TL841			02 23 17				3253sec	325
78	"			03 17 56					273
79	"			04 04 12					303
80	BIAS(4)								
81	Comp							FeNe	50s
START →	1995 JAN 18/19 Wed/Thurs - Continuation at next Region Red/Dome							93%H	+1.2°C
cc29882/83	inboard/outboard HARTMAN					01 12 20 W	-20 34 21	FeNe Clear	40/65
84	Comp							FeNe Clear	90sec
85	TL830 LAMP			19:36.57					1040
86	"			19 55 09					1040
88 ✓	BIAS(4) (done after cc29888)								
87 ✓	TL830 LAMP			20 12 53					1045
89 ✓	Comp							FeNe Clear	
90	TL850 Lamp			20 41 18					

CCD
Spectr. Temp.
Focus 6
Spectr. Temp.

Exp. Mtr	Sec
1's Filter	
81K	
66K	
33K	
CCDT:	
+1.2°C	
2'.00	
2'.00	
2'.00	
1200	

CCD Spectr. Temp. −100.4 °C Dome Temp./Hum +00.1°C 87% H Transparency Conditions Fog outside 2.2

Focus 6.98 90 CGAIN as always.

Spectr. Temp. −100.2°C Dome Temp./Hum. −00.2°C 87% H

C LAMBDA exactly

MAX ADU

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
No Filter				CASS CCD	1800 ln/mm G=4175	30μ	3850Å	1/2			
81K					Tilt=39.45			15	Phillip's Florescent x2 Lamp Test	Continued	
66K								16			
73K								16			
								1/2c			
								17ci			
CCDT=−101.0°C				Focus 6.98 still, 90 CGAIN					418 0	50 1024 4 1 CCD FMT (SAME)	
+1.2°C	6.98			CASS CCD	1800 ln/mm G=4300 Tilt=40.4°		4085Å ±1.5Å	3/4	focus.	(outband only slightly for cooler temp)	
								5c			5.2K
21,600								6ci	TL 830 Pair of Lamps under		11K
21600								7ci	Top and of Telescope (SAME config as previous night.)		11K
								1/2ci			
22,000								8ci		continuum 5 ADU above background	11.5K
								9ci			
21,200								10ci	The Blue looking Lamp		8 K

213
P92 of Wed / THURS

Date 1995 Jul 18/19 Observers [BLG] Tm

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCD29890	TL850 Lamp					01:12:20	-20 39 21		900
92	TL850 Lamp			21 12 56					900
93	Comp							FeNe Clear	90s
94	TL841			21 38 15					950
95	TL841			21 55 06					950
96	"			22 11 12					950
→ 97 99	FLATS x3							TUNG Clear	45s
CCD29900	Comp							FeNe Clear	90s
CCD29901/02	Outboard/Inboard	HARTMAN		23 12				FeNe Clear	40/65
03	BIAS (4)								
04	Comp								90s
05	TL841 Lamp			23 21 07					209
06	TL841 Lamp			23 25 39					200
07	TL841 Lamp			23 33 19					200
08	TL850 Lamp			23 41 04					170

CCD
Spectr. Temp.
Focus
Spectr. Temp.
Exp Mtr

CCD
~~Spectr.~~ Temp. ..... Dome Temp./Hum. +1.2°C ... 93% Transparency Conditions ... Foggy! Dome closed of 214 course.

Focus .. 6:98 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

More, with twin fixture Phillips Lamps on upper catwalk beneath end of Telescope

Comparison Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
90	-				CASSCCD	1800 ln/mm	306u	4085Å @	10			MAX 8.4K
90					*	G4300						
					*	TILT=40.4°		Raw 512	10		Plenty of continuum 80 ADU at Roland, 3ADU above background.	8.4K
13									11			
150	33,700								12c;		Pure T=+1.3°C	10.4
90									12			10.3
90									12			10.4
45									12c;			14K
3									12c;			
4/5	+1.3°C	Set	6.95		CASS CCD	1800 ln/mm G4430 TILT=41.7°	306u	4285Å ±.5Å	17/18	92% focus.	just overlapping with Rigton previous Region	@center
									1/2			
90									19c;			6K
29	5000								20			15.6K
200	4950								20		~10ADU continuum at center, above background	15.3K
20	4800								20			
170	8800								21			10.6K

*Note regarding Grating Tilts, (All Final G settings made after Homing grating)

215 pg 3 Wed/Thurs

Date 1996 Jan 18/19 Observers [BIn] Tn Light project

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CG29909	TL 850			234431		01:17:20	-20342		170
10	TL 850			235315					170
11	Comp							FeNe Clear	90s
12	TL 830			00 0205					191
13	TL 830								191
14	TL 830								185
15	~~Comp~~ BIH5(4)								
16 → 18	FLATS x3							TUNG	
19	Comp							FeNe Clear	90s
20	Comp							FeAr Clear	60
21	TL 830			003502					800
22	"			004919					800
23	"			010932					800
24	Comp							FeAr Clear	60s
25	TL 850			013057					1200
	~~BIH~~								

Spectr. Temp.
Focus ... 6.9
Spectr. Temp

Exp Mtr	Sec
4:00	
4:00	
4:00	
4:00	
17500	
30,600	

Spectr. Temp. ..... Dome Temp./Hum. +1.4°C 93.5% Transparency Conditions ... fog 216

Focus ... 6.95 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

MAX

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 l/mm G=4430	306u	4285Å	21			~~12.8K~~ ~~12.8K~~
4000					Tilt 41.7°		I.5Å ≈ Row 512	21			12.6K
								22			
4200								23			
4700								23			15.6K
4700								23			15.3K
								1/2			
								24			
								26	Reference FeAr in 25c		14K
					1800 l/mm G=4555	306u	4468Å F 1Å	27	Exact same Range as common Bln/Wide Region for Research		2K
18,500	one weak em line ≈ Row 322 (≈ 10ADU above backgnd)				Tilt = 42.8°			28			350
								28	Blue end has some weak scattering or wings from massive Em of 4285 Region Continuum ≈ 70ADU above Background.		
								~~28~~			
								29			
30,600								28	Read out in edit time ✓	~~Blue~~	

217 pg#4 Wed / Thurs

Date 1995 Jan 18/19 Observers T.G.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC29926	TL 850			01 53 36		01 12 W	-20°	122 sec	1222
27	TL 850			02 14 47					1200
28 → 30	FLATS x 3			02 38				TUNG Clear	15 secs
31	BIAS(4)								
32	TL 841			02 45 11					700
33	"			02 57 13					700
34	"			03 09 23					700
35	Comp							FeAr Clear	60s
[Bln] Smt/Tn	Lamp Tests continued 1995 JAN 23/24 - All procedure hopefully the same.								
CC29936/37	Inboard / outboard					0 0	≈+25	FeAr Clear	40/60
38	BIAS(4)								
39	Comp					01 12 W	-20 32	FeAr Clear	90s
40	TL 830			19 18 31		~~19 18~~			1200
41	TL 830			19 40 12		~~19 40 12~~			1200
42	TL 830			20 01 36		~~20 01 36~~			1200
43	Comp					01 12 W		FeAr Clear	90

Spectr. Temp. ..... Dome Temp./Hum. +1.4°C 93%H Transparency Conditions ..foggy..very wet..... 218

Focus ....6.95.....

CCD Spectr. Temp. ..-100.2°C.. Dome Temp./Hum. +1.5°C 95%H

Exp. Mtr. no filter	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
31,600				CASS CCD	1800 l/mm G=4555	306u	4468Å	10c;		≈500 ADU continuum above background	50
30,400				Grat	Tilt=42.8°			10c;		No Em features	
								30c;			13K
								1/2			
18,400								20c;		Just continuum at	
7,800								"		≈ 230 ADU above background.	
								"		Very weak Em at	
										Pix 320 again	
No filter	All warmed ≈ too Perseus										
90	CGAIN			Dome H = 80%							ADU MAX
-0.3°C	6.95			CASSCCD	1800 l/mm G=4680	306u	4688Å ±.3Å	3/4	focus Test	fine @ Row #517 set for very slightly cooler	
(CASSETUP output for				0° ≈ 4688Å)	TILT=43.95°			1/2			
focus → 6.92								5c!			3K
27,000 G → 4678								6c;		Strangest line (ABOVE continuum)	160
TILT → 44.9								6		Continuum ≈ 150 ADU above background.	
28,000								6			
								7			

2.1.9
pg 2

Mon / Tues

Continuation of Lamp Tests

Date 1995 JAN 23/24 Observers [illegible] / [illegible] Philips TL 80 Fluorescents.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC29944	TL 850			20 30 21		01 12 W	−20:32		1800
45	"			21:03:30					1800
46	"			21:33:50					1800
47	Comp			23 09 23				FeAr Clear	90s
48	TL 841			23 16 13					1080
49	"			23 34 47					"
50	"			23 53 27					"
51	Comp							FeAr Clear	90s
52 54	FLATS x3							Tung Clear	9 sec
55	BIAS(4)								
56	Comp			00 35				FeAr Clear	90s
57	TL 841			00 44 55					1200
58	"			01 05 17					1200
59	Comp							FeAr Clear	90s
60 60	FLATS x3							Tung Clear	5 sec
63	BIAS(4)								

CCD Spectr. Temp
Focus 6:
CCD Spectr. Temp

Exp Mtr Mode | Se

46,400
21,000
15,300
15,200
Comp
26
30

~~Spectr.~~ CCD Temp. −100°C ..... Dome Temp./Hum. −00.3°C 80.0% H Transparency Conditions ....cloudy, Dome closed.

Focus ....6.95 .....

~~Spectr.~~ CCD Temp. −94°C ..... Dome Temp./Hum. −01.0°C 77% H

Lambda

Exp. Mtr. (Comparison Filter Exp.)	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
None											
1800				CASS	1800 l/mm	306μ					
46,400				CCD	G=4680		4688Å	8ci	Lamp Tests	(Strongest Em Line ≈ 150 ABOVE continuum)	
1800					Tilt 43.95°			9cf		Continuum Level ≈ 800 ADU above background	
1800								9ci			
90s								10			
1000	26,000							11		CCDT = −100.4°C	
"	25,300							11			
4	25,200							N			
90s								12			
90sec								13			14K
9s	(Cassetup → G → 4793, 45.1° Tilt) .6093 Focus				1800 l/mm G=4798		4861Å	14			5.8K
(500)	26,700				Tilt=44.95°			15		Blue end continuum	3.7K
120s	26,500							16		≈ 300 ADU above background	3.7K
90s								17			
5sec								18			13.6K
								1/2			

* Note Dewar Starting to warm up by 01.25 = −95°C should be −100°C

221
pg#1 Tues / Wed

Date 1995 ... Jan 24/25 Observers [Blm] Lamp Tests ... Tu / Sent

Emulsion Batches:
.....
.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC29964/5	inbound / outboard Comp / Stellar → old designation					01 12 W	−13°	FeAr clear	40/60
66	BIAS(4)								
67	Comp			18 39				FeAr clear	90s
68	TL 841			18 42 22		01 12 W	−20°29'		1900s
69	"			19 14 45		"	"		"
70	"			19 46 45					
74	Comp			20 45				FeAr clear	90s
71	TL 850			20 55 39		01 12 W	−20 29		1800
72	"			21 25 58					180
73	"			21 56 23					1800
75	TL 830			22 32 19					2402
76	"			23 20 30					2400
77	"			00 00 59					2400
78	COMP							FeAr clear	90s
79	BIAS(4)								
80-82	FLAT x 3							Twilight	5

CCD
Spectr. Temp. -100°C ..... Dome Temp./Hum. -00.3°C 79.5% Transparency Conditions .. cloudy 222

Focus .. 6.95 ..... 90C 90in

CCD
Spectr. Temp. -100.7°C .... Dome Temp./Hum. ..... cLumbdy 4/8 0 50 1024 4 1 CCDFMT

Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality max 400
40/60					CASS CCD *	1400 ln/mm G=4798	306u	4861A	3/4		* spectrograph controller failed But grating was disabled. Previous night. ∴ Tilt	
						Tilt=44.95			1/2		should still be same.	
90s									5			
1900s	44500								6	Bln LAMP TEST		~6K
									6			
									6			
90									7			
1500	45000								8			6.4K
80									8			
1500									8			
2400	53 000								9			8.2K
2400	52 000								9			
2400									9			
90s									10			~~12.2K~~
									1/2			
5									11			13.4K → 12.8K

223

Date 1995 Jan 25/26. Observers [Bln]/Smt ..... iks/kk as backup.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	(s) Exp.
EC29983/4	INBOARD/OUTBOARD					1h 12m W	-20° 18'	FeAr clear	45/60
85	BIAS(4)			20 27		FOR ALL EXPOSURES OF ANY KIND			
86	COMP							FeAr clear	90
87	TL830			20 40 20					1800
88	"			21 11 49					1800
89	"			23 03 16					1800
90-92	FLAT x 3					"	"	Tung ½Ap	7
93	COMP							FeAr clear	90

CCD Spectr. Temp. -100°C Dome Temp./Hum. -0.6°C/75.7% Transparency Conditions cloudy, snow 224

Focus 6.92

Spectr. Temp. Dome Temp./Hum. 418 0 50 1024 4 1 CCDFMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
45/60				CASS CCD	1800 l/mm G=4920	306μ	5016 Å	3/4	FULVS TEST	CCD completely saturated on red half. Took biases & cis'd a lot to get rid of the leftover "continuum".	
								1/2			
90								5			
1200								6	Bin LAMP TESTS	Done by batch file TL.bat.	
1800								7			
1800	DON'T KNOW IF I'D TRUST THIS ONE.							8		Didn't appear in cache after exposure, the first time. CCD CSS 386 crashed before taking replacement exposure.	
7								9	max ADU ~12.9K → 12.7K	MANY camera/Heuriton/386 interaction problems.	
90								10.			
		All to Perseus & WORM									

pg#1 225 Thurs / Fri CCD Direct

Date 1995 JAN 27/28 Observers KK / ~~[illegible]~~ / Tu

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time ~~E.S.T.~~ SID TIME	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CD00246	Bias								
247	Bias 4X								
248-252	5 flats on Twilight sky					$2^h \pm$		7680Å	60-120
53	ADS 2081	023724	+48 48	~~[illegible]~~ 02 50	✓				25sec
54	"			~~[illegible]~~ 02 52	✓				"
57	"			02 53	✓				"
55	"			02 54	✓				"
56				02 55		00 12W			
58									
CD00259				SIDEREAL TIME					
→ 263	ADS 2081			0303 →	03 09				25s
264	ADS 2081			0312 –	0313				49sec
265	ADS 2644	033142	+00 16	0321 –					30sec
266	~~ADS 2644~~ BLAS(4)	"	"	After Reboot.					
267 – 275	ADS 2644	"	"	0329	03 44		+00 33 42		60sec
276	"	"	"	0348					53

Spectr. Temp. CCD
Focus
Spectr. Temp.
Exp Mtr. Se
drive o
Then 30
TRAILE

CCD Spectr. Temp. −10.1.0°C Dome Temp./Hum. −6.3°C 63.9%H Transparency Conditions Clearing → ~~clouding in~~ 226

Focus 30 CGAIN

Spectr. Temp. Dome Temp./Hum. −7.0°C 64.7%H 30 C GAIN

Filter Telescope focus for Direct = 2781

Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks CCD EMT	Quality Signal
								7680A			0 0 512 512 2 2	ABORT Background
60-120					CCD Direct	NONE						
25sec											Faintone 200	
"									4		BRT star 10,000	
"									5			
"									6c			
									7ci			
									8ci			
25s									3ci, 4ci, 5, 6, 7, 8ci		Another series	
240sec	drive off TRAIL								3ci			
30sec	For 1st exp. (too eult) Remaining exps 60 secs.								(4ci = 30sec)	~~5ci = 60sec~~	Then CCD 3 messed up Reset hauricons CSS 386	
									1/2 ci			
60sec	Then 30 secs.								3ci,		MAX 10K Faintest ≤ 1KADU max	
53	TRAILED				DRive off				4ci			

Pg #2 227

Date 1995 Nov 27/28 Observers K.K. / J.T.

Emulsion Batches:

Spectr. Temp.
Focus
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time ~~E.S.T.~~ (SIDERIAL Time)	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Seeing
		Telescope position									
CD00277 → 284	TRIplet	03 46 57	+24 06 21	≈03 56		00 10W			30s		
285	Same			4:05					150s		
286											
→ 293	HD23439	03 40 06	+41 10 00	≈04 15					30		
294	HD24760	03 51 08	+39 43 16	04 30 MID TRAIL		00 32W	DRIVE OFF TRAILED		53s		
295	NGC1952 CRAB M1	05 28 30	+21 57 00	05 02					300s		
296	"	"	"	05 09		00 08E			176		
297	"	"	"	05 31		00 09W			712		
298	"			05 50					300s	RG 18+	
299	"			05 59					300		
300	"			0604					300s		
301	bias 4X										
302	NGC1952			06 17					10 min	Hα	
303	"			06 36					180		
304	"								180		
305	"			~~06 47~~					180		
306	"			0647							

Spectr. Temp. ..... Dome Temp./Hum. -7.0°C 64% Transparency Conditions Fine 228

~~Focus~~ 30 cg gain still

Spectr. Temp. ..... Dome Temp./Hum. -9.0°C 57.5% H

Comparison Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ Filter	P.H.	Program	Remarks	Quality
30s					CCD Direct			7680A	5c;	Scaling using	Triplet near ζ Tau	
150s									5c;			
30			8th mag pair + a faint pair To SW						6c;		Δα 00 00 08	
53s			2.84	B0.5 IV					6c;		-00 03 03	
300s								5100	3c;			
176								"	4c;	1900 coords Entered.	Δα = -00 00 01	
712								"	6c;		Δδ = -00 01 09	
300s	BG 18 filter							BG18	3c;		Δα = +00 00 11	
300								"	3c;		Δδ = -00 02 09	
300s								"	3c;			
10min	Hα filter							Hα	6551A			
140								Hα	6560A			
140									"		more west this time	
180									"			

pg #3 229

Emulsion Batches:

Date 1995 JAN 27/28 Observers K.K. / Tn

Sid Time

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CD00 307	NGC 1952	05 28 30	+21 57	06 51		W			180
308	"			06 55		1 24W			180
309	NGC 2392	07 29 12	+20 55						60
310	"			7:15		0 10E			180
311	BIAS(4)								

Note - Some FRAMES TAKEN PREVIOUS Night.
All is with CCD DIRECT now at CASS FOCUS Plane.

CD00244 PINHOLE: ≈10 sec

CD00245 SKY FLAT FAR EAST ≈45° Dec

Spectr. Temp. ..... Dome Temp./Hum. −9.3°C 57.4% Transparency Conditions ... Clear 230

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. −10°C

Comparison Filter	Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ Filter	P.H.	Program	Remarks	Quality
	180					CCD DIRECT			6560			slightly west of previous.	
	180												
	60												
	180		poor, ≈ 18 pixels FWHM ≈ 4.5"										
										1/2			
	210		To show off centered mounting.								Cloudy Sky		
											Cloudy Sky		
									All to				

231 page 1 SAT / SUN CCD DIRECT

Date 1995 JAN. 28/29 Observers K.K./T.M.

Emulsion Batches:

SIDERIAL Time

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time ~~E.S.T.~~	Ending Time ~~E.S.T.~~	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CD00 312	BIAS (4)								
313	FLAT off Secondary screen					00 01W	+20°	1 x	1/10s
114 → 117	" "	"	"					4 x	2/10s
118 — 122	" "	"	"				5x	4 x	.5 sec
CG400 700 703	HD13013	07 02 18	+43 59 07	≈18 30 EST		01 00W		4 x	67ms
704 — 705	"							2x	133ms
CD00 323	BIAS (4)								
CD00 324 327	HD13013			≈03 29		01 23W		4x	1sec
328 → 337	ADC 2081	02 37 24	+48 48	03 38	03 40	00 59W		10x	1sec
338 — 347	ADS 2644	03 31 42	+ 0 16	3 53				10x	4s
348	ADS 2644			04 11		00 33W			
349	BIAS (4)								
350 → 354	TRIO near	03 41 32 HD 23630	23 47 36	≈04 20		00 37W		5x	6s
355	" "	"				00 39W			120s
356-365	HD 23439	3 40.1	41 10	4:37					15 then 30

CCD ~~Spectr.~~ Temp. -100°C Dome Temp./Hum. -9.5°C 57.5%H Transparency Conditions CLEAR 232

Focus 30C gain

Spectr. Temp. ~~Dome Temp./Hum.~~ FILTER 0 0 512 512 2 2 CCD FINT MAX

Exp. Mtr.	Seeing	Pk. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
							6560Å			50 Watt Tungsten	
							"			Iodide lamp	≈7K
1/5 sec exps							Green	3ci			11K
	≈3"	V 6.4	G8III			306a on CCD	DIRECT MOUNT		Seeing Test	2842 focus for Slit	
									"	Dome WNW Light west wind.	
								1/2	Tel Focus	2844 ideal focus	
		V 6.4	G8III				Green	3ci		for CCD DIRECT	
		V 5.78 8.13	G9V K6V					3ci		for Brightone	3.8K
								4ci			9K
								4ci		DRIVE off TRAILED	
								1/2			
								3ci			
		8.15 8.74	G5 G5							= ADS 2757	

233 p9#2

Date 1995 JAN 28/29 Observers K.K. / Tg

Emulsion Batches:

SIDERIAL

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time ~~E.S.T.~~	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CD 00366	HD24760	03 51 08	+39 43 16	04:51					
367 → 372	HD 26965	04 10 40	−07 48 30	05:15		1 08W			1sec
373 → 382	HD26965 BC	faint	pair	05:24		1 18W			20sec
383	HD26965			05:36					
384 → 388	Trapezium	2000 05 35 24	−05 23 00	05:44		0 14 W		5x	3sec
389–92	"	"	"	0547					20sec
393	TRAP TRAIL					0 20W			02s
394	NGC1952	05 28 30	+21 57 00	0620		0 52W			300s
395	"			0628					300s
396	"			06:34					300s
397	"			06:39					300s
398 – 399	HD 50635	06 49 00	+13 18 18	06:54		00 01W		2x	1sec
CD00400.	PIF/Fts "	"	"	07:00		0007W			1/6
401.	PIF/Fts "	"	"	07:04					
402.	PIF/Fts "	"	"	0707					
403	BIAS								

CCD
Spectr. Temp.
Telescope
Focus 28
Spectr. Temp.

Exp. Mtr Seec

Take 1/5 secs

4 number

16 segm
16 x
16

CCD Spectr. Temp. −102.0°C Dome Temp./Hum. −10.5° C 59.7% H Transparency Conditions Fine 234

Telescope Focus 2844

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Filter ~~Emulsion~~	P.H.	Program	Remarks	Quality
				CCD DIRECT			Green		UΔα −00 00 03 UΔδ −00 00 54	TRAIL Drive off	
1sec								5ci	only 30ADU above background for Faint pair	Bright one. MAX 15.5K	
Then 1.5 secs exps											
2sec		9 and 11	m6 and	DA				5a			
										Trailed, Drive off.	
3sec								5ci			
20sec	A number of nearby Regions.										
82s											
300s										Accident resulted in encoder normalization to NGC 1952.	
300s											
300s											
300s											
300s										Sharper image	
2x 1sec										Focus To #2832	
46	16 sequences in one large FITS File.							using CCD2A		Using a mosaic sequence	
	16 sequences								" "	(502, 422, 134, 140, 2, 2 CCD Fmt)	
	16										
									16 sequence ALSO		

235 pg #3

Date 1995 Jan 28/29 Observers K.K. / T.M.

Emulsion Batches:

Spectr. Temp

Focus ... 28

Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T. (SIDERIAL)	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Sec
CD00404	HD50635	064900	+131818	07:14					74s		
405 —406	HD56986	071409	+22 10 00	07:22					3/10s		
407	PIF	"	"	07:26		0007W			3/10s		
408	PIF FTS	"									
409	PIF FTS	"									
410-1	Bias										
412	HD56986	071409	+22 10	07:40		0021W			74s		
413 —415	HD79210	090742	+530700						90		
414	"	"	"						10		
415	"	"	"	8:09		0103E			8		
416/17	BIAS 2x2	16 sequence									
418 —419	HD79210	090742	+530700	08:20		0052E			8sec		
420/21	"	"	"	0825		0049E			156		
422-26	NGC 2632	083937	193406	08:40		0006E			3sec		
	~~AD57044~~	~~084518~~	~~08 1400~~								

Tel posn

Sun 4 secs

Spectr. Temp. ..... Dome Temp./Hum. -11.5°C 63.9%H Transparency Conditions Fine 236

Focus 2831

Spectr. Temp. ..... Dome Temp./Hum. .....

Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Filter Emulsion	P.H.	Program	Remarks	MAX Quality
14s					CCD DIRECT			Green		DRIVE off	TRAILED	
3/10s												
3/10s											CCD FMT for sequences 520 392 80 81 22	
											16 image sequences	
74s									1c	TRAILED	CCD FMT 0 0 512 512 22	14K
10			Both 5-7th			~~check header dimens~~				Mosaic	344 316 230 158 22	
10											"	
8											"	
											"	
8sec			418 missing!						1c		0 0 512 512 22	
156									3c		TRAIL, DRIVE off	
3sec	Then 4 secs,								3c		Triple at south end.	12K
									4c		Faintest 4th star 100 ADU ABOVE	

237
pg#4

Date 1995 Jan. 28/29 Observers KH / JG

Emulsion Batches:

SIDEREAL

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CD00427	ADS 7044	08 45 18	+08 14	09:00		W			5 sec
428 ✓	"			09:05					6 sec
429 ✓	"			09:10					6 sec
430 ✓	"			09 22		W			6 sec
431-2	Bias								
433	AO58119	11 12 54	+32 06 00	09 44		1 28 E			1 sec
434	✓	"	"	09 50					1
435	"	"	"	09 51					1
436	"			09 54	=0140 EST				1
437	BIAS sequence								
OR 438?									

CV
Speetr Temp
Focus ... 28
Spectr. Temp
Exp. Mtr Se
16

CCD Spectr. Temp. -102.0°C Dome Temp./Hum. -11.9°C 65% H Transparency Conditions Fine 238

Focus 2830

Spectr. Temp. Dome Temp./Hum. -12°C 63.7% H

MAX

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
5sec				CCD DIRECT			Green	4ci		556, 504, 64, 64, 32 CCD FMT 16 sequence	940
6sec									F=2830	36 sequence	
6sec									F=2840	36 sequence	
6sec									F=2845	36 sequence	
										36 sequence	
1sec	16 sequence						550 370 128 128 1 1 CCD FMT			16 " " ~~557 416 64 64 1 1 CCD FMT~~	
1										16	
1										16	
1										16	
										16	

pg#1 239 Sun / mon

Date 1995 JAN. 29/30 Observers KK / TM

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CG407 06/09	HD13013	02 02 18	+43 59 07	≈ 1830				4x	67ms
CG407 10/11	"	"	"			00 40W		2x	133ms
C000439	BIAS			SIDEREAL					
→ 440/441	ADS 2218	02 49 42	+26 28 00	03:09		0 14 W			8sec
442 ✓	"	"	"	03:17		0 27W			10sec
443 ✓	"	"	"	0324					10sec
444 ✓	"	"	"						10s
445/446	BIAS								
447	ADS 2218	02 49 42	+26 28 00	0339					5sec
448	"	"	"	0352		00 56W			63s
→ 449/450	ADS 3514	04 48 48	+07 13 00	0403		00 48 E			20s
451 ✓	"	"	"			00 44E			10sec
452 ✓	"								4sec
453 ✓	"								4sec
454/455	BIAS								
456	ADS 3514	04 48 48	+07 13			E			

CCD Spectr. Temp. -100°C ..... Dome Temp./Hum. -65°C 72.3 84 Transparency Conditions .... Part. Cloudy 240

Tel Focus .... 2800 ideal

30 C GAIN

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	<2"	64	G8 II	FEN CCD GUIDE CAMERA		ABOVE 306m	C		Seeing Test	no wind, no funs	
	"								" "	Dome to WNW	
				CCD DIRECT			GREEN			CCD FINT 0 0 512 512 22	
										~~520 432 77 81 22~~	
	16	Sequence.								560 426 9195 22	
	"		"								
	"		"								
2x	16	Sequence Too							Tel	Focus = 2799.	
	64	Sequence.			PIF also saved					focus 2799	
										TRAILED Drive off.	
										0 0 512 512 22	
	16	Sequence							FINT	450 300 114 173 22	
	16	"								images all took dbled	
	16	"								in EW direction,	
	16	"								TRAIL, drive off	
									Fint	0 0 512 512 22	

Pg#2 241

Sun / mon

Date 1995 JAN 29/30 Observers KK / Tm

Emulsion Batches:

SIDERIAL

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time ~~E.S.T.~~	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CG407 12/15	ADS 3514							4x	67ms
16/17	"							2x	133ms
CD00457/61	TRIO near HD23630	03437	+23 4746	04:51	(Hyg 1362	1338			1sec
CD00 4562	HD23638 TRIO	"	"			0143W			1sec
4563	"			0536		0147W.			2sec
CD0045 64/65	ADS 5197	062836	+14 49	05:46		0047E			4sec
CD00466 ✓	"	"	"	05:52		0040E			4sec
467 ✓	"	"	"	0557					4sec
468 ✓	" (PIF File written too)			6:04					4sec
469/70	BIASES			06:11					
471 ✓	ADS5197	only PIF written			Too Big for RAM disk		3.5 meg		5sec
472 (?)	BIAS	only PIF "							
473	HD47575	063410	+130422						
474/478	FLATS					0 0	platform	TUNG	0.5s
479	BIAS(4)								

Spectr. Temp.
Focus 2
Spectr. Temp.
Exp Mtr Sec
Turn 2 secs
5k Pg 4
7.4k max
Sec on tor

Spectr. Temp. ..... Dome Temp./Hum. -7.6°C 77% H Transparency Conditions ... increasing cloud....

Focus ....2799.....

Spectr. Temp. ..... Dome Temp./Hum. .....

242

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD DIRECT	ABOUT 306a slit				Seeing Test for scale	no focus change	
									" "	" " from previous CCD DIRECT	
Then 2 secs for remainder, Then 4 secs)								1c		Focus 2797 (2798 encoder in window) (Then logged)	
5K AAU max with mirror covered, (East Side)											
7.4K max											
				1.7" sep double					PRIMARY MIRROR Half covered with East Leaves, A Test		
									50 sequence	CCDFMT	
									"	450, 416, 97, 52, 33,	
									"	some cloud	
									"		
				now 1-1 binning					50 sequence	456 361, 230, 150, 1, 1	
				" " "					50 "	" " " "	
			TRAILED							Clouds!	weak
Secondary screen mounted, and source pointed at it										00 512 5122 2 CCDFMT	
										" " " " "	

pg# 1 243 Mon/Tues

Philip's ~~Fluorescent~~ Lamp Tests

Date 1995 Jan. 30/31 Observers [Bln] .. Jn.

Emulsion Batches: .....

All done same as previous ... Lamp Tests

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr
cc2999 4/5	A Board / outboard Hartman					01 12 W	a+30°	Fe Ar Clear	50/70	-27°c
96	BIAS(4)									
97	Comp					01 12 W	-20 43	Fe Ar Clear	90s	
98	TL830 Lamp			183139	✓				1400	23K
99	"			185521	✓				1400	23K
cc30,000	"			191901	✓				1401	23K
01	TL850 Lamp			195009	✓				1800	
02	"			202029	✓				1800	
03	"			205049	✓				1800	1.3 K Sum
04	TL841 Lamp			212556	✓				1700	31,700
05	"			215518	✓				"	
06	"			032357	✓				"	
07	Comp									
08/10	FLATS x3							TUNG Ap=1/2	7sec	
11	BIAS(4)									

CCD Spectr. Temp. ...
Focus ... 6.9
Spectr. Temp. ...

CCD Spectr. Temp. -100°C Dome Temp./Hum. -2.7°C 84.3% H Transparency Conditions cloudy dome closed for tests 244

Focus 6.95

Spectr. Temp. Dome Temp./Hum. -2.5°C 82.9% H

C LAMBDA 418 C 50 1024 4 1 CCDFMT ADU MAX

Exp. Mtr. no filter	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
-2.7°C	Set 6.95			CASS CCD	1800 l/mm G=4920 TILT 46.1	306u	5016Å ±.3Å	3/4		In focus @ center	
								1/2			
								5			
23K								6		weakest em ≈ 30 ADU above continuum	1.8K
23K								6		[weakest continuum ≈ 150 ADU above backgnd]	
23K								6			
								8		more Blue than previous temp	
								8			
103 K	sum of 3 exps & intervening WRITES							8		~~Redder than previous~~	2.7K
31,700								10c		Redder than previous	2.7K
	Automatically done							"			
								"			
								11			
								12			13.7K
								1/2			

pg 42 245

Date 1995 JAN 30/31 Observers [Bln] Jn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Seeing
CC30012	Comp			2311		01 12W	-20° 43	Fear Clear	90s		
13	TL 841			231402					900	15,800	
14	"			232917					900	15,750	
15	"			234434					900		
16	TL 850			000508					1200	22,100	
17	"			002522					1321	33,900	
18	"			004743					1229	22,100	
19	Bias(4)										
20	TL 830			011341					1200	21,700	
21	"			013356					1200	21,350	
22	"			015407					1322	21,380	
23	Comp			022043				Fear Clear	90s		
24 - 26	FLATS x 3							Jung Apr 1/2	5s		

CCD
Spectr. Temp.
Focus 6.75
Spectr. Temp.

~~Spectr.~~ CCD Temp. −101.5 °C Dome Temp./Hum. −2.4°C 83%H Transparency Conditions Cloudy still

Focus 6.95

Spectr. Temp. ..... Dome Temp./Hum. −2.6°C 78%H (Lambda)

246

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CASS CCD	1800 ln/mm G=5047	30μ	5200Å I.5Å	11			
15,800				Actual	Tilt 47.1°			13		[≈3 em lines > 20 ADU above continuum]	
15,750								13			
								13		Lowes continuum Level ≈ 160 ADU above backgnd.	
22,100								15		1 em line ≈ 100 ADU above	
33,900								15		continuum. Continuum Level min ≈ 170 ADU	
22,100								15			
								1/2			
20,700								17		The redder ~~pair~~ pair again	
20,350								17		[Strongest em ≈ 100 ADU above continuum]	
20,380								17			
								18		Continuum minimum ≈ 100 ADU above background	
								19			
				All to Worm & Perseus.							

pg # 1 ~~247~~

Date 1995 ~~Feb~~ Feb 1/2 Observers [Bln]/Smt iks/Hdy as backup. (unable to observe in person.)

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC30027/8	INBOARD/OUTBOARD HARTMANN					0 ~~18~~ W	36°	FeAr clear	40/20
29	BIAS(4)			00 44 ~~18 59~~					
30	COMP							FeAr clear	60
31	HD37017	5 30 25	-04 33 36	01 03 21		4 28 ~~3~~ W			1800
32	COMP							FeAr clear	60
33	BIAS(4)			01 45					–
34	COMP							"	60
35	HD37468	5 33 44	-02 39 28	01 49 31		4 51 W			600
36	COMP							"	60
~~37~~	COMP							"	"
TOO WEAK, ABORTED	HD37017	5 30 25	-04 33 36	02 14					600
	COMP								
37	COMP							FeAr clear	60
38	HD86360	9 52 51	+12 55 19	02 37 49		~ 2h W			1330
39	COMP							"	60

CCD ~~Spectr.~~ Temp. -100.°C Dome Temp./Hum. -1.8°C/68.5% @ 20 00 Transparency Conditions. just cleared, then clouded 248 really quickly @ 20 00 or so. Clearing again @ 00 20.

Focus ~~6.00~~ 7.00 ~~Spectr. Temp.~~ 90 again Dome Temp./Hum. -6.9°C/61.2% @ 1 00

FANS OFF

Exp./Mtr. (B6 39 FILTER)	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 l/mm G = 4555	300μ	4475Å	3/4		~~424 0 50 1024 4 1 CCDFMT~~ 4170 50 1024 41 CCDFMT	
								1/2		(410 0 50 1024 41 CCDFMT IS PERFECT! FOR 6070 = G)	
								5			
3222	7"-8"	6.56	B2 Ⅴp		~150:1	S/N		6	Bln Sp. Bin	(He rich) TEL. ON E SIDE	1200
								7			
								1/2			
								8			
9330	>8"	3.81	O9.5 Ⅴ		S/N ~ 230:1			9	Bln pgm.	hard to guide – windy. TEL E SIDE	2400
								10			
								11			
190 MOSTLY SKY	>10"	6.56	B2 Ⅴp					12	Bln Sp. Bin	VERY LOW, MAYBE IN TREES SOON TEL. E SIDE	
								13		VALIANT EFFORT ABORTED. HAD TIME TO KILL.	
								11			
15280	4"-5"	5.26	B9 Ⅳ		S/N ~ 330:1			12	Bln Sp. Bin	STRUNG. TEL E SIDE	5.5K
								13			

pg # 2 269

Date 1995 Feb 1/2 Observers [Bln] / Smt ... Km as backup

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC30040	BIAS(4)			03 04					—
41	COMP							Fstr clear	60
42	HD84441	9 40 11	+24 14 05	03 17 50		2 07 W			240
43	COMP							"	60
44	COMP							"	"
45	HD66141	7 57 04	+02 36 34	03 40 42		4 29 W			1201
46	COMP							"	60
47-55	FLAT x 9					2^h	$+5^\circ 30'$	Tung clear	15
56	BIAS(4)			04 17					
57	COMP							Fstr clear	60
58	HD112028	12 48 23	+83 57 24	04 33 27		0 36 W			1202
59	COMP							"	60
60	BIAS(4)			05 44					

Spectr. Temp. -100°C Dome Temp./Hum. -8.7°C/60.6% Transparency Conditions clear 250

Focus ~~[illegible]~~ 7.00

Spectr. Temp. ..... Dome Temp./Hum. .....

417 0 50 1024 4 1 CCDFMT
FANS OFF

Exp. Mtr. (Pg. 39 FILTER)	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 ℓ/mm G = 4555	306μ	4475Å	1/2			
								14			
17000	5"	2.98	G1 II					15	STD. VEL.	TEL. E. SIDE	5.4K
								16			
								17			
13500	5"-8"	4.39	K2 IIIb F2-0.5					18	STD. VEL.	TEL E SIDE STILL close in dec & HA to exposures for HD37017 & HD37468	3.1K
								19			
								20		TEL. E. SIDE	13.5K →12.4K
								1/2			
								21			
15100	5"?	5.2	A0 Shell					22	Bln A shell	TEL. E. SIDE	6.4K
								23			
								1/2		.75h later	

All to Perseus & WORM

251

Date 1995 Feb 2 Observers Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CG40718/21	HD ~~113911~~ 120245	13 43 11	+38 23 33	~06 00				4x	.067s
22/23	"					0 30 W	~~5~~ 81° Alt.	2x	.133s
CG40724-7	BD+37 2174	11 16 12	+37 19			3 14 W	53° Alt	4x	.233s
CG40728-31	HD128718	14 33 24	+48 39			~~3 14 W~~	~~53° Alt.~~	4x	.067s
32/33	"	"	"			0 17 W	85° Alt.	2x	.133s
34-37	HD142658	15 50 42	+10 24			0 48 E	55° Alt.	4x	.233s

Spectr. Temp.
Focus ..45..
Spectr. Temp.
Exp Mtr

Spectr. Temp. ..... Dome Temp./Hum. -11.8°C/61.3% Transparency Conditions ..clear..since..0:00.....

Focus ..as..best..as..possible (2785 secondary) @ 1st seeing test.

Spectr. Temp. ..... Dome Temp./Hum. -12.2°C/61.3% @ end of all.

TELESCOPE ON W SIDE
FANS OFF

Comparison Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
.067s		yuch!	6.95	KOIII	EEV CCD 100483?	—	above 306μ	—	—	SEEING TEST	DOME WSW, lite W wind, HA = 30m W	
.1335										"		
.233s			primary 9.1	?						SEEING TEST SCALE CALIBRATION		
.067s		5"-6"?	6.7	F2						SEEING TEST	DOME W, lite W wind.	
.33s										"		
.1335			primary 8.6	primary F0						SEEING TEST SCALE CAL.	Dome S	

p. 1253

Date 1995 Feb 2/3 Observers Mki/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC30061/2	INBOARD/OUTBOARD HARTMANN							FeAr clear	60/60
63	BIAS (4)			18 20					
64	COMP							FeAr clear	60
65	HD211211	22 10 32	+42 27 28	18 40 48		5 10 W			660
66	COMP							"	60
67	BIAS(4)			19 03					–
68	COMP							"	60
69	HD23169	03 37 54	+25 25 00	19 06 21		0 11 W			906
70	COMP							"	60
71	BIAS(4)			19 24					
72	COMP							"	60
73	BD+16 516	03 44 43	+16 57 06	19 33 26		0 31 30 W			900
74	"			19 49 12		0 47 30 W		"	900
75	"			20 04 35		1 03 W			905
76	"			20 21 32		1 19 50 W			906
77	COMP							"	60

CCD
~~Spectr.~~ Temp. -102.0°C ..... Dome Temp./Hum. -9.3°C / 46.8% Transparency Conditions thin patchy cloud → haze 254

Focus .....6.95.....

~~Spectr. Temp~~. 90 again..... Dome Temp./Hum. .....

DOME FANS ON
410 0 50 1024 4 1 CCDEMT

06 560

Exp. Mtr. FILTER	Seeing	~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ LAMBDA	~~P.H.~~ CI	Program	Remarks	Quality MAX ADC
				CASS CCD	1800 l/mm G=6070	306μ	6609 Å	3/4			
								1/2			
								5			
2862	3"-4"	5.68	A2Vnn		2 peaks across rows, brighter @ 24 col, other @ 20			6	TELLURIC STD	First 1000 exp. mtr. counts or so, the star wasn't centred. then in cloud.	3.1K
								7		5 DOME FAN TURNED OFF AT END OF STELLAR.	
								1/2			
								8			
725	2"-3"	8.75	G2V		S/N ~ 130:1			9	STD. VEL	thin cloud. RV = +13.3 ± 0.2 km/s	1.4K
								10			
								1/2			
								11			
438	3"	9.40 -9.71	0.65* K0V+wd		S/N ~ 95:1			12	Mki V471 Tau	thin cloud → haze	700 above b/g
433		"	"		S/N ~ 95:1			13	"	very thin haze now.	760 above b/g
435		"	"		S/N ~ 95:1			13	"		740 above b/g
430		"	"		S/N ~ 95:1			12	"		720 above b/g
								14			

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Date 1995 Feb 2/3 Observers Mki/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC30078	BIAS(4)			20 43					
79	BD+16 516	03 44 43	+16 57 06	20 45 49					900
80	"			21 ~~01 02~~ 33 36					900.
81	"			21 ~~01 13~~ 49 24					900
82	"			22 04 52		3 03 W			900
83	COMP							FeAr clear	60
84	BIAS(4)			22 24					
85	BD+16 516	03 44 43	+16 57 06	22 25 32		3 24 W.			900
86.	"			41 47		3 40.			900.
87	"			58 04					900.
88	"			15 07		4 14			900.
89	COMP			1				FeAr Clear	60
90	BIAS(4)			23 37					
91-95	FLAT x5					4 25 W		Tung Ya Ap	6 s.
	TEL MOVED TO E SIDE OF PIERS								

CCD ~~Spectr.~~ Temp. −10.2°C Dome Temp./Hum. −10.1°C/44.9% Transparency Conditions clear 256

Focus 6.95

~~Spectr. Temp.~~ 90 again Dome Temp./Hum.

N DOME FAN ON ONLY
410 0 50 1024 4 1 CCDEMT

Comparison Exp	Exp. Mtr. FILTER 06 560	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CX	~~P.H.~~ CI	Program	Remarks	Quality MAX ADU
					CASS CCD	1800 l/mm G=6070	306μ	6609Å	1/2			
900	450		9.40 -9.71	CBS* KOV+ND					15	Mki V471 Tau		
900	400.		"	"	S/N	still 95:1			16	"	"900 obs" was ignored at first. That's why this one is late.	Bry (Bry saturating 660 above blg)
900	378		"	"	S/N	~ 92:1			15	"		
900	369		"	"	S/N	~ 90:1			16	"		550 above blg
60									17			
									1/2			
900	380		"	"					18	Mki V471 Tau		
900	380		"	"					"	"		
900	430.		"	"					"	"		
900	?		"	"					"	"		
60									19			
									1/2			
60s									20			13.4K & 13.1 → 12.6

p. 3257

Date 1995 Feb 2/3 Observers Mki / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC30096	COMP							FeAr clear	60
97	HD26162	4 03 20	+19 20 42	23 59 24					300
98	COMP							"	60
99	BIAS(4)			00 08					—
CC30100	COMP							"	60
01	BD+16 516	3 44 43	+16 57 06	00 17 50		5 17 W			900
02	"			00 33 18					960
03	"			00 50 09					900
04	"			01 07 11		6 06 W			900
05	"			01 23 00					960
06	"			01 40 04		6 39 W			900
07	COMP							"	60
08	BIAS(4)			01 58					—
09-13	FLAT x5					6 46 W	+17°	Tung ¼ AO	9s
14	COMP							FeAr Clear	60

CCD ~~Spectr.~~ Temp. -102°C Dome Temp./Hum. -10.6°C/52.1% Transparency Conditions clear 258

Focus 6.95

~~Spectr.~~ Temp. 90 cgain Dome Temp./Hum.

N FAN ON ONLY
410 0 50 1024 4 1 CCDFMT

Comparison Exp.	Exp. Mtr. FILTER (06 560)	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ cλ	~~P.H.~~ c:	Program	Remarks	Quality max ADU
60					CASS CCD	1800 l/mm G=6070	306μ	6609 Å	21		TEL. ON E SIDE NOW.	
300	4750	~3"	5.50	K1 III					22	STD. VEL.	RV = +23.9 ± 0.6 km/s	8.8K
60									23			
-									1/2			
60									24			
900	338	4"	9.40 - 9.71	0.65* KON+wd	S/N ~ 80:1				25	Mki V471 Tau	TEL STILL E SIDE.	460 above b/g
900	318		"	"	S/N ~ 75:1				26	"		390 above b/g
900	276				S/N ~ 60:1				27	"	GETTING TOUGH TO GUIDE	200 above b/g
900	234	5"			S/N ~ 60:1				28	"	DRIFTED OFF SLIT FOR A COUPLE OF MINUTES DURING WEATHER CHECK.	220 above b/g
900	228				S/N ~ 58:1				25	"	SKY LINES SHOW UP (18 above b/g) IMAGE VERY ELONGATED ALONG SLIT	180 above b/g
900	163	6"-7"							26	"	PRIMARY MIRROR APERTURE PARTIALLY BLOCKED NOW	90 above b/g
60									29			
-									1/2			
9s									30		CLOCK DRIVE TURNED OFF	15.3K 714.6K
60									5			

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Date 1995 Feb 2/3 Observers Mki / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Spectr. Temp / Focus / Spectr. Temp.
CC30015	HD90861	10 24 18	+29 05	02 17 38		0 33 W			615	~3000
16	COMP							FeAr clear	60	
CG40738-41	HD90861	10 24 18						4x	.067	
42/43	"					~0 40 W	~71° Alt.	2x	.133	
CC30017	BIAS(4)			02 43					—	
18	COMP							FeAr clear	60	
19	BD+30 2163	11 24 46	+30 31 06	02 46 05		0 04 E			300	1045
20	"			02 53 02		0 03 W			300	1100
/ /	/ / " /	/ /	/ /	~~02 58 56~~	/ /	~~0 08 45 W~~	/ /	/	~~300~~	1137
21	"			03 04 32		0 17 W			432	1550
22	"			03 14 04		0 24 W			300	1170
23	"			03 19 29		0 30 W			371	1370
24	"			03 26 10		0 36 W			300	1350
25	COMP							FeAr clear	60	
26-30	FLAT x5					~0 40 W	+30°	Tung ¼ Ap	7s	

Spectr. Temp. ..... Dome Temp./Hum. -11.5°C/55.2% Transparency Conditions ... Clear 260

Focus ..... 61.95 .....

~~Spectr. Temp.~~ ..90..cgate..... Dome Temp./Hum. -11.5°C/54.6% @ SEEING TEST

N FAN ON ONLY

410 0 50 1024 4 1 CCDFMT

Comparison Filter Exp.	Exp. Mtr. OG360 FILTER	Seeing	✓ ~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ cλ	~~P.H.~~ c.	Program	Remarks	Quality MAX ADU
615	~3000		7.20	K2 III	CASS CCD	1800 l/mm 6=6070	306μ	6609Å	6	STD. VEL.	TEL. on E SIDE STILL RV = +36.3 ± 0.4 km/s	5.4K
60									7			
.087		3"	7.20	K2 III	EEV CCD 100483	–	ABOVE 306μ	–	–	SEEING TEST	Dome S, no wind, clear TEL on E side, further W than normal.	
.133									–			
–									1/2			
60									8			
300	1045		6.84 -7.10	F0 - F2	S/N ~ 155:1				9	MKi AW UMa	TEL STILL ON E SIDE	~2K
300	1100		"	"	S/N ~ 155:1				9	"		2.2K
400	~~1143~~	~~/~~	~~"~~	~~"~~	~~S/N ~ 160:1~~	~~/~~	~~/~~	~~/~~	~~10~~	~~/ " /~~	PANICKED overwrote LOST in wrong cache!	~~2.0K~~
432	1550				S/N ~ 195:1				10	"	too long, wrote to wrong cache.	3.0K
300	1170				S/N ~ 170:1				9	"		2.4K
377	1370				S/N ~ 180:1				10	"		2.8K
300	1080				S/N ~ 150:1				9	"		2.0K
60									11			
7.5									11			13.5K → 13.1K

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Date 1995 Feb 2/3 Observers Mki / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC30131	BIAS (4)			03 40					—
32	COMP							FeAr ~~clear~~	60
33	BD+30 2164	11 25 ish	+30 31	03 44 41		1 19 W			1800
34	COMP							FeAr clear	60
35/36	INBOARD/OUTBOARD HARTMANN					1 20 W	+30°	"	60/60
37/38	INBOARD/OUTBOARD HARTMANN					1 50 W	+30°	FeAr clear	50/60
39	BIAS (4)			04 45					
40	COMP							"	60
41	BD+30 2164	11 25 ish	+30 31	4 48 08				1900.	1750
42	COMP							"	60
43	BD+30 2163	11 24 46	+30 31 06	5 33 22		2 43 W			300
44	"			5 39 43		2 50 W			302
45	"			5 45 14					300
46	"			5 50 55					320
47	"			5 57 11					315
48	"			6 02 50		3 13 W			300

~~Spectr.~~ Temp. ...−100.°C..... Dome Temp./Hum. −11.9°C/52.9%, Transparency Conditions ...clear.....
N FAN ON ONLY

Focus .....6.95 / 7.00.....

~~Spectr. Temp.~~ ..90.cgatm..... Dome Temp./Hum. .....

410 0 50 1024 4 1 CCDFMT

CC 560 Exp. Mtr. FILTER	Seeing	√ ~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CΔ	~~P.H.~~ Ci	Program	Remarks	Quality max ADU
				CASS CCD	1800 ℓ/mm G=6070	306μ	6609Å	1/2		TELESCOPE ON E SIDE	
								14			
893		9.45	G?					15	Mki		1.9K
								14			
								3/4	FOCUS TEST	set a bit warm now	
				CASS CCD	1800 ℓ/mm G=5547	306μ	5890Å	3/4	FOCUS TEST	SAME CCDFMT.	
								1/2			
								5			
		9.45	G?					6	Mki		
								7			
2880		S/N	~	180:1				9	Mki AW UMa		3.2K
2700		"		170:1				10	"	thin cirrus clouds.	2.7K
2600		"		160:1				9	"		2.4K
2700		"		170:1				10	"		2.2K
2140		"		150:1				9	"	thicker cloud now, noticeable at least	2.2K
2150		"		150:1				10	"		2.3K

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Date 1995 Feb 2/3 Observers Mki / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC30149	COMP							FeAr Clear	60
50-54	FLAT x5					3 25 W	+30°	Tung ¼ Ap	10
55	BIAS(4)			6 21					–
56	COMP							FeAr clear	60
57	HD107328	12 15 16	+03 52 10	6 34 39					180
58	COMP							FeAr clear	60
59	COMP							"	"
60	HD87901	12 27 22	+10 03 03	06 51 03					27
61	"			06 52 57		5 21 W			22
62	COMP							"	60
63-67	FLAT x5					5 25 W	+10°	Tung ¼ Ap	11
68	BIAS(4)			7 01					

CCD ~~Spectr.~~ Temp. -10.1°C ← JUST CHECKED @ 6 20 Dome Temp./Hum. -11.7°C/50.6% Transparency Conditions some thin cloud now 264

Focus 7.00

~~Spectr. Temp.~~ 90 again Dome Temp./Hum.

N DOME FAN ON ONLY

410 0 50 1024 4 1 CCDFMT

Exp. Mtr.	Seeing	✓ ~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ λ	~~P.H.~~ C	Program	Remarks	Quality
				CASS CCD	1800 l/mm G=5547	306μ	5890 Å	11		TEL. STILL ON E SIDE	
								11			13.5K →13.0K
								1/2			
								5			
8450		4.96	K0.5IIIb Fe -0.5					6	STD. VEL.	RV = +35.7 ± 0.3 km/s	10.0K
								7			
								8			
12000		1.35	BTVn					9	TELLURIC STD	trailed L to R	~6K
12000		"	"					9	"	trailed R to L	~6K
								8			
								8			13.3K →12.5K
								1/2			
				All to Perseus & WORM						Telescope focus last @ 2834	

265

Date ..1995..Feb 3/4.... Fri / Sat Observers [KK]..T.H.....

Emulsion Batches: .....

CSS 386 Time Reset to WWV Time on 00074 pgm.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC084 81/82	inboard / outboard					≈2 30 W	≈+30°	ThAr	25/20
CC084 83	BIAS(4)								
84	Comp							ThAr	15s
85	HD 178778	02 47 10	+52 21 12	18 51 43		00 56 W			1260
86	Comp							ThAr	15s
87	Comp							"	"
88	HD 34029	05 09 18	+45 53 47	19 20 58		1 01 E			989
89	Comp							ThAr clear	15s
90	HD 34029			19 39 17		0 45 E			901
91	Comp							ThAr clear	15s
92	HD 34029			19 55 48		0 32 E			600
93	COMP							"	15
94	BIAS(4)			20 08					—
95	COMP							"	15
96	HD 29316	4 32 02	+53 16 34	20 14 31		0 41 W			172
97	Comp							ThAr	15s

CCD Spectr. Temp. ..... Focus ..... Spectr. Temp. .....

Exp. Mtr	Seeing
880	1:2
10 K	
16.4K	
19.2K	
450	1:2

CCD ~~Spectr.~~ Temp. -100°C Dome Temp./Hum. -6.1°C 70% H Transparency Conditions Part Cloudy 266

Focus .235

Spectr. Temp. Dome Temp./Hum. Clambda Tel focus 2272 mAX ADJ

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion CD	P.H. C.	Program	Remarks	Quality
				echelle CCD 17.80°	W 1200 l/m H: 1200 l/m x=.4460	60μ = .277 400μ = .225	3960Å 3960Å	1/2	focus test	CCD FMT 0 0 128 1024 8 1	
							3960Å			CCD FMT 0 0 256 1024 4 1	
										encoders normalized on HD178878 also cloud at end	
8 60	1"-2"	V 3.09	G5 III +A5					4c:	KK pgm		≈ 600404
								5c:			
								5c			
10 K		V 0.08	G5 IIIe +G0 III					6c:	KK pgm	cloud at times	4.7K
								5			
16.4K								3c:	KK pgm	clear stretch	8.9K
								5			
19.2K								6	"		9.0K
								5			
								1/2			
								5			
450	1"-2"	VAB 5.36	A5n					4	KK pgm		400ADU
								5			

267 pg#2 Fri / Sat

Date 1995 Feb 3/4 Observers [K.K.] Smt. / Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE08498	HD 29316	4 32 02	+53 16 34	20 44 36		1 11 W			1747
99	Comp							ThAr	15sec
CE08500	BIAS(4)								
01	Comp							ThAr	15sec
02	HD47105	6 31 56	+16 29 05	21 25 49		0 18 E			969
03	Comp							ThAr	15sec
04	HD47105	6 31 56	+16 29 05	21 43 30		0 0 0			968
05	COMP							"	15
06	Comp							"	15
07	HD 56986	7 14 09	+22 10 00	22 05 10		0 10 E			1592
08	Comp							ThAr	15s
09	BIAS(4)			22 35					
10	COMP							ThAr	15s
11	HD56986	7 14 09	+22 10 00	22 40 34		0 21 W			1348
12	Comp							ThAr	15s

CCD Spectr. Temp. −100.2°C Dome Temp./Hum. −7.9°C 67% H Transparency Conditions Part. cloudy 268

Focus 1235

Spectr. Temp. Dome Temp./Hum. −8.2°C 73.1% H

Comparison Exp	Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1747	465	1"-2"	AB 5.36	A5n	echelle CCD 17-80°	1200 l/mm x=0.4460	60μ W 400μ H	3960A	6ci	KK pgm	2nd exp.	
15sp												
									1/2			
15sp									5ci			
1969	3830		B 1.9	A0 IV					3	KK pgm		3K
15sp									5ci			
968	5000								4	KK pgm		
15									5			
15									5			
1592	1000	<2"	B 3.9	F0 IV					6ci	KK pgm	Could see faint companion in Finder and then found it in guiding views. Est. 13m at 5 and 7" separation	Ave 400
15									5			
									1/2			
15									5			
1345	1425		B 3.9	F0 IV					6	KK pgm		
B									5			

269 pg #3 Fri/Sat

Date 1985 Feb 3/4 ..... Observers [illegible] ... Tu/Sunt .....

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE08513	Comp							ThAr	15s
14	HD 61421	07 34 04	+5 28 53	23 07 52		00 23 W			1000
15	Comp							ThAr	15s
16	BIAS (4)			23 27					
17	Comp							ThAr	15s
18	HD 62509	07 39 12	+28 16 04	23 33 33		00 51 W			1484
19	Comp							ThAr	15s
20									
→ 24	FLATS x 5			00 10		201 30 W	+28° 01	TUNG	300s
25	BIAS (4)			00 40 48					
26	Comp							ThAr	15s
27	HD 62509	07 39 12	+28 16 04	00 44 08		01 57 W			1180
28	Comp							ThAr	15s
29	Comp							"	"
30	HD 34029	05 09 18	+45 53 47	01 12 56		4 58 W			1342
31	Comp							ThAr	15s
32	BIAS (4)			01 38					

CCD Spectr. Temp. ...-10.200°C... Dome Temp./Hum. ...-8.2°C 73.3%H Transparency Conditions . increasing cloud ...270

Focus ...1235...

Spectr. Temp. ..... Dome Temp./Hum. .....

c Lambda MAX

Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
15s					echelle CCD 17.80°	1200 l/m x=.9460	60u W 400u H	3960Å	5ci			
1000	4,140	2"	B 0.74	F5 IV-V					3ci	KK pgm	STANDARD some cloud	1.6K
15s									5			
		~~1.5"~~							1/2			
15s									5ci			
1484	160	1"-2"	V 1.14	K0 IIIb					4	std vel	Thick cloud	MAX 70ADU ABOVE Background
15s									5cq			
3005							60u width 700u Height		2cq			1.2K
									1/2cq			
15s					Back To →		60u width 400u Height		5ci			~~2.7~~
1188	2 000		V 1.14	K0 IIIb					6ci	Std vel	Not so thick cloud	2K
15s									5cq			
1									5ci	KK pgm	Only far NW clear now	
1347	6 38		V 0.08	G5 IIIa +G0 III					3ci	KK pgm	some cloud → lots	200 above b/g
15s					All to Perseus &			WORM	5cq		clouded out.	

271 SAT/Sun

Date 1995 Feb 4/5 Observers [KK] Tn / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE 08533/4	INBOARD/OUTBOARD					2 47 W	+12°	ThAr	30/15
35	BIAS(4)			01 42					
36	Comp							ThAr	15s
37	HD34029	05 09 18	+45 53 47	01 12 01		5 07 W			1344
38	Comp							ThAr	15s
39-41	FLAT x 3					"	+46°	Tung	300
42	BIAS(4)								
	Then Tests	Starting 03 EST		Feb 5/95	Tn	CCD T unregulated			
CE08543	Flat for Non motion Ap extraction					00 00	-33 30°	TUNG	
44	Comp							ThAr	30s
45									
→ 96	Comp on Batch NMTST.BAT			x 52 exp		(900 sec Quiet between)		ThAr	30s
97	Comp before Raising Telescope			17 58 17				ThAr	30s
98	FLAT			18 00 15				TUNG	40s
99	Comp just before Raising			18 23 31				ThAr	30

CCD ~~Spectr.~~ Temp. ..−10.05°C.... Dome Temp./Hum. ..−8.9°C./51.6% Transparency Conditions .snow..but..clearing..high..winds.

Focus .....0.231..... Temp Dropping Fast −14°C By 01:15

Spectr. Temp. ..... Dome Temp./Hum. ...−15°C...53.1%

272

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	X-Grating/ Tilt	Slit	~~Emulsion~~	~~P.H.~~	Program	Remarks	Quality
30/15				CCD ECHELLE 17.80	1200 l/mm 0.4460	60μ wid 500μ HEIGHT =0.215	3960 Å	3/4	FOCUS TEST	0 0 128 1024 8 1 CCDFMT 400μ slit height for focus test.	
								1/2		0 0 256 1024 4 1 CCDFMT	
15s								3			
1744 374	very very poor	✓ 0.08	G5 III e + G0 III					4	KKpgm	thin cloud	60 ADU clearing b/g
15s								5			
300						700μ =.195 height		6			10K, ? 9.8K
								1/2			
	CCD T = −125°C			90 C gain						CCD FMT	MAX
	Dome T −127°C but probably −17°C and getting colder					700μ H 60μ W		2c.		875 448 100 12 11 Air pressure Rising ≈ 100 Kpsals	~~3400~~
30s								1c:			34K
30s								1c:			
	CCD T −116°C Dome T = −14.7°C										
48										Air Pressure 100.35 kpsals @ 3 Am Feb 6	
30	CCD T now −110°C					(focus test showed that focus was still Reasonable)					

273 pg#1 sun/mon

Date 1995 Feb 5/6 Observers [KK] Tn/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE8600/1	INBOARD/OUTBOARD					$2^h 46^m$ W	+12° 11'	ThAr	30/24
02	BIAS(4)								
03	COMP							"	15s
04	HD34029	5 09 18	+45 53 47	01 13 36		5 03 W			1200
05	COMP							"	15s
06	HD 34029			01 37 13		5 27 W			1205
07	Comp							ThA	15s
08	HD34029	05 09 18	+45 53 47	01 59 49		5 50 W			1200
09	Comp							ThAr	15s
10	BIAS(4)			02 28					
11	Comp							ThAr	15s
12	HD61421	07 34 04	+5 28 53	02 29 16		3 57 W			1200
13	Comp							ThAr	15s
14	Comp							"	15s
15	HD 102 509	11 42 50	+20 46	03 00 18		6 29 W			1204
16	COMP							ThA	15s

CCD ~~Spectr.~~ Temp. ...-100°C..... Dome Temp./Hum. -16.7°C / ? @ focus test Transparency Conditions . clear, fine snow beforehand. not too windy tonight

Focus ..... 0.225.....

~~Spectr. Temp.~~ ..90..again.... Dome Temp./Hum. -19.7°C / 55.1% once dome was opened. -22.2°C

24 MAX

Comparison Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	X-Grating/ Tilt	Slit	~~Emulsion~~	~~P.H.~~	Program	Remarks	Quality
30/24					CCD ECHELLE tilt = 17.80	1200 l/mm tilt = 0.4470	60μ width 500μ height (= 0.215)	CCD 3960Å	2/3	FOCUS TEST	set a smidgen too cool 0 0 128 1024 8 1 CCDFMT	
						not touched ∴ probably erroneous value in logbook prior to tonight			1/2		0 0 256 1024 4 1 CCDFMT	
15s									2			10K
1200	9520	variable 3"-7"	V 0.08						3	KK pgm		20K
15s									4ci			10K
1205	10,200								3ci	KK pgm		20K
15s									4ci			
1200									5ci	KK pgm		
15s									4ci			10K
									1/2ci			
15s									1			9K
1200	575	4"-6"	B 0.74	F5 IV-V					2ci	KK pgm	Std Procyon	
15s									4			
15s									4			10K
1800	194	5"	B 5.0	A+ G5 III+IV					5	KK pgm	(Above background)	100 ADU ~~[illegible]~~
15s									4			

275 pg#2

Sun/mon

Date 1995 Feb 5/6 Observers [KK] Jn/Sant

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Sec
CC0817	BIAS(4)			0333							
18	HD102509	11 42 50	+20 46 29	033619		01 00 W			1482	190	4
19	Comp							ThAr	15s		
20	Comp							ThAr	15s		
21	HD62509	07 39 12	+28 16 04	040916		05 19 W			500	1500	4
22	Comp							ThAr	15s		
23	Comp							"	"		
24	HD84441	09 40 16	+23 14 05	042738		03 40 W			681	500	3
25	Comp							ThAr	15s		
26	BIAS(4)			0444							
27-31	FLAT x 5					3 40 W	+23°	Tung	300		
									~~30/18~~		

cop
Spectr. Temp.
Focus
Spectr. Temp.

CCD Spectr. Temp. −102.0°C ..... Dome Temp./Hum. −22.1°C 61.3% H Transparency Conditions .. Hazy (slightly) 276

Focus ... .225 .....

Spectr. Temp. ..... Dome Temp./Hum. −22.5°C 63.5% H Thin Snow. MAX

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				echelle 17.80	1200 ln/mm .4470	60μ W 500μ H	3960A	1/2			
190	4"	B 5.0	A +G5III-IV			−.215		5cp	KK pgm		
								4cp			
								4			
1500	4"	V 1.14	K0III6					6	Std Vel	Above backgnd	160 ADU
								4cp			11.7K
								4cp			
500	3-3.5"	V 2.98	G1 II					3cp	Std Vel	Above backgnd	≈100
								⋮		snow in dome, tightly, of course.	
								1/2			
						60μ W 800μ H		4			11.3K
							All to Persens & WORM				
	~~−14.8° .025 sec~~				~~79 88~~						

277 pg#1 mon / TUES

Date 1995 Feb 6/7 Observers [K.K.] T.a

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ce08632/33	inbound / outBOUND Hubiman					2 45W	+25°	ThAr	30/18
34	BIAS(4)								
35	Comp							ThAr	15s
36	HD 31964	04 54 47	+43 40 32	20 06 35		00 24 W			1800
37	Comp							ThAr	15s
38	Comp							"	"
39	HD 32068	04 55 29	+40 55 48	20 41 03		01 05 W			2212
40	Comp							ThAr	15s
41	BIAS(4)								
42	Comp							ThAr	15s
43	HD 29094	04 29 46	+41 03 34	21 24 35		02 15 W			2235
44	Comp							ThAr	15s
45	Comp							"	"
46	HD 29316	4 32 02	+53 16 34	22 07 31		03 05 W			0853
47	Comp							ThAr	15s
48	BIAS(4)								

Spectr. Temp. (CCD) −101.0°C ..... Dome Temp./Hum. −14.8°C 58% H Transparency Conditions ....Hazy - thin cloud....

Focus ....1.225..... 90 Cgain −17.3°C shortly after opening no wind tonight anyway 28

Spectr. Temp. (CCD) −100.7°C ..... Dome Temp./Hum. −17.4°C 60.5% H

≈ MAX ADU

Comparison Filter	Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	30/3	−14.8°C	1.225 SET			echelle CCD 17.80° tilt	1200 l/mm 1.4470	60 μ wid 500 μ Hight =.215	λ/4 =.277 3960Å	3/4	focus Test	CCD Fmt 0 0 128 1024 8,2 [SET for Then]	[cooler now]
										1/2		0 0 256 1024 4 1	
	15s									3		encalibs norm on SAME	7.2K
	1800	1500	2"-4"	V 2.99	F0I + B					4	KK STD Spectrum pgm		≈ 1K
	15s									3			7.2K
	15									3			
	22.2	1800	3"	V 3.75	K4II + B8V					5	KK STD		≈ 400 ABOVE Backgnd
	15s									3			8.1K
										1/2			
	4.15s									3			8.2K
	22.35	1400	2"-3"	V 4.25	K4III + A3V					6	KK Std	completely clear here	≈ 300 ADU ABOVE Backgrnd
	4.15s									3			8.2K
										3			8.8K
	29.53	630	2"	AB 5.36 V	A5n					4	KK pgm		≈ 500 above backgnd
	4.15s									3			9.8K
										1/2			

279
pg#2 Mon / Tues

Date 1995 Feb 6/7 Observers [KK] .. J.A.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCD8649	Comp							ThAr	15s
50	HD47105	06 31 56	+16 29 05	23 03 35		1 36 W			1214
51	Comp							ThAr	15s
52	Comp							"	"
53	HD 64421	07 34 04	+05 28 53	23 38 05		00 56 W			435
54	Comp							ThAr	15s
55	Comp							"	"
56	HD 80586	09 15 36	-09 07 53	23 53 57		00 14 W			3012
57	Comp							ThAr	15s
58	BIAS (4)								
59 63	FLATS x 5					01 16 W	+12°	Tung	300s
64	BIAS (4)								
65 66	inboard / outboard					02 45 W	+12°	ThAr	30/20

~~Spectr.~~ CCD Temp. −102.0°C ..... Dome Temp./Hum. 17.3°C ... 61.5% H Transparency Conditions ... Fine + some haze 280
some cloud coming

Focus ... .225 .....

Spectr. Temp. ..... Dome Temp./Hum. −18.0°C ... 63.0% H
cd

All Cloudy by 2

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ × Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				Echelle CCD 17.80° tilt	1200 l/mm .4470	60μ w 500μ H	3960Å	3			
6400	2"-4"	B 1.9	A0 IV					5			6K
	2"-3"	B 1.9	A0 IV					3	KK pgm		
								3			
8800		B 0.74	F5 IV-V					6	KK (std vel use)		2K
								3			8.9K
								3			9.7K
522	3"-5"	V 4.8	G8 III-IV + F5 V					4	KK spec std clouded end		<100 abac background.
								3			8.9K
								1/2			
						60μ w 800μ H > .185		2			13.2K
								1/2			
−17.5°C	.225 SET							7/8	focus test	0 0 128 1024 8 1 CCD FMT	

All To Perseus & Woman

281
pg#1 Tues/Wed

Date 1995 Feb 7/8 ..... Observers [B.In.] Tn. / Mki. / J.Tn. ...

Emulsion Batches: .....

CASS Light Baffle (Long one) Reinstalled .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC30168	BIAS(4)								
170	Comp							FeNe Clear	20s
171	Comp for map and ID purposes							FeAr Clear	90
172 174	TL830 x3			19 56 18		01 12 W	-21 15		120s
175 - 177	TL850 x3			20 17	20:17 → 20:28				160s
178 - 180	TL841 x3				20:40				130
181	Comp							FeNe Clear	20s
182 - 184	FLATS x3							TungAp=1/2	4sec
CC30185	BIAS(4)								
186	Comp							FeAr Clear	60s
187	BD+16 516	03 44 43	+16 57 06	21 26 38		W			912
188	~~Comp~~ "	"	"	21 42 18				~~FeAr Clear~~	~~900~~
189	"			21 57 44					937
190	"			22 13 51					900
191	Comp							FeAr	60s

CCD Spectr. Temp. −100°C ..... Dome Temp./Hum. −10.4°C 66.2%H Transparency Conditions Mostly cloudy 282

Focus 7.00 ..... 90 Cgain

Spectr. Temp. ..... Dome Temp./Hum. −13.8°C 71.6%H 410 0 50 1024 4 1 CCDFMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 ln/mm G=5170	306μ	5373Å	1/2 c		5275 → 5470 Å	
				Actual Tilt = 48.2°			± .3Å	3c:			8K
No focus Test possible Tonight.								4c:		ST	1.2K
1400								5c:	Fluorescent lamp Tests.	Strongest Line near Red end ≈ 5457Å	12K
1700								6c:			15K
2000								7c:			13.5K
								8c:			10K
								9c:			14K
Done T = −13°C after opening										Mostly clear now	
								1/2			
		v 9.4 − 9.7			1800 ln/mm G=6070	306μ	6609Å	3			
780	2-3"		KOV	+wd				4	Mk: pgm	Telescope East Side near moon.	≈ 70/1
785	3"							5			
780								6			
740	3-4"							7			
								8			

pg#2 283 Tues/Wed

Emulsion Batches: .....

Date 1995 Feb 7/8 ..... Observers Miki/Ta ....

CSS 386 is 7secs ahead of W.W.V. Time

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC30192	BD+16 516	03 44 43	+16 57 06	22 33 59					920
193	"			22 50 41					960
194	"			23:07:41					906
195	"			23 23 39					980
196	Comp			23 40				Fe Ar Clear	60s
197	BIAS(4)			23 42					
198	BD+16 516			23 43 01					901
199	"			23 58 33					901
200	"			00 13 58					900
201	"			00 29 53		5 40W			389
202	Comp							Fe Ar Clear	60s
203	BIAS(4)			00 40					
204	Comp							Fe Ar Clear	60s
205/06	HD87901	10 03 03	+12 27	00 47:37 00 49 57					77/40
207	Comp							Fe Ar Clear	60s

CCD Spectr. Temp
Focus 7.0
Spectr. Temp.

Exp Mtr	Sec
730	
650	
640	4
645	
635	
600	4
360	5

CCD
Spectr. Temp. ..... Dome Temp./Hum. -13.7°C 70-79% Transparency Conditions. P.S.A.T. cloudy 284
Focus 7.00 To completely cloudy
Spectr. Temp. ..... Dome Temp./Hum. -15.4°C 73%H
c Lambda Tel Focus 2822 mA

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
		V 9.4-9.7	K0V	CASS CCD	1800 l/mm G-6070	306a	6609Å	9ci	MK, pgm	Strong moonlit sky	
730								10ci			
650								11ci			
690	4"							12ci		thin cloud.	
								13ci			
								1/2			
645								14			
635								15		Hα em not visible now	
600	4"							16		Hα em " " "	
260	5"							17		cloud e end.	
								18			
								1/2			
								19			
14K		V 1.36	B7V					20h	Tellmic std, x2		≈ 10K

285
pg# 3 Tues/Wed

Date 1995 Feb 7/8 Observers MKS / JM

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC30205	Comp							Fe Ar Clear	60s
209	HD 62509	073912	+281604	01 01 08					16s
210	Comp							Fe Ar Clear	60s
211 → 214	FLATS x 4					≈2 20W	≈+28°	Tung Ap=1/4	5sec
215	BIAS(4)								

Spectr. Temp. ..... Dome Temp./Hum. -15°C ... 72% Transparency Conditions ... Cloudy ... 286.

Focus ... 7.00 ...

CCD Spectr. Temp. -101.0°C ... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 l/mm G=6070	306u	6609Å	21		Tel still east side	
	3"	V 1.14	K0 III b					22	Stil vel	thick cloud	
								23			
								24			10K
								1/2			
				All to Perseus S							

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Date 1995 Feb 11 Observers Km / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC30216	COMP							FeNe clear	20
17	HD74280	8 37 60?	+03 45 28	01 41 59					200
18	COMP							FeNe clear	20
19	HD74280	8 38 00	+03 45 28	01 48 17		~2 15 W			200
20	COMP							FeNe clear	20
21	BIAS(4)			01 55					
22	COMP							"	20
23	HD100889	11 31 36.5	-09 14 57	02 05 37					215
24	COMP							"	20
25	HD 100889			02 12 24		0 11 E			400
26	COMP							"	20
27	COMP							"	"
28	HD114330	13 04 46	-05 00 18	02 28 33		-1 ~~30~~ E?			380
29	"			02 33 49		1 25 E		"	300 ~~210~~
30	COMP							FeNe clear	20

CCD Spectr. Temp.
Focus
Spectr. Temp.
Exp. Mtr
NONE TONIGHT

CCD ~~Spectr.~~ Temp. -100°C Dome Temp./Hum. -6.0°C / 59.0% ← 85% when started (before opening up) Transparency Conditions Cleared after snowstorm. 288

Focus 7.12 (a guess)

Spectr. Temp. ..... Dome Temp./Hum. .....

BOTH FANS ON

410 6 50 1024 4 1 CCDEMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CA	~~P.H.~~ C.	Program	Remarks	max Quality ADU
NONE TONIGHT				CASS CCD	600 l/mm (c) tilt = 24.8°	250μ	~3760 Å	3		NO GRATING CONTROL, NO HARTMANN MASK, NO EXP. MTR.	
	3"-4"	4.30	B5V					4	Km MK Std.		13.9K
								5		TEL ON E SIDE	
								6	"		12.3K
								7			
								1/2			
								8			
	3"-4"	4.10	B9.5Vn					9	"		5.8K
								10			
								11	"		12.3K
								12			
								13			
	4"-5"	4.38	A1 IVs + Am					14	"		12.1K
	"	"	"					15			10.3K
								16			

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Date 1995 Feb 11 Observers Km / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc30231	BIAS(4)			2 41					
32	COMP							FeNe clear	20
33	HD129956	14 40 25	+01 08 22	02 51 21		2 34 E			800
34	"			03 05 20		2 19 E			900
35	COMP							"	20
36	COMP							"	"
37	HD74280	8 38 00	+03 45 28	03 31 33					240
38	"			03 38 01		4 10 W			500
39	COMP							"	20
40	BIAS(4)			3 49					—
41	COMP							"	20
42	HD100889	11 31 37	-09 14 57	03 55 32					580
43	COMP							"	20
44	COMP							"	"
45	HD114330	13 04 46	-05 00 18	04 12 55		~0 15 W			240

Spectr. Temp. ...-1.00°C... Dome Temp./Hum. -7.2°C/61.6% and climbing but going down on catwalk (80% → 76%) Transparency Conditions still clear, hazy on horizon, bright waxing gibbous moon. 290

Focus .....7.12.....

Spectr. Temp. ..... Dome Temp./Hum. .....

Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CX	~~P.H.~~ ci	Program	Remarks	max Quality ADU
	NONE				CASS CCD	600 ℓ/mm (c) tilt = 24.8°	250μ	3760 Å	1/2		Telescope still on E side of piers	
20									17			
800		4"	5.69	B9.5V					18	Km MK Stds.	S/N ~ 280:1 at red active end ~ 160:1 at blue quieted	9.3K
900			"	"					19	"		11.0K
20									20		SE DOME FAN OFF NOW	
"									3			
240		5-6"	7.30	B3V					4	"		5.6K
500									6	"		8.5K
20									7			
-									1/2			
26									8			
580		3-4"	4.70	B9.5V					9	"		13.5K
20									10			
"									13			
37		4-5"	4.38	A1 IVs + Am					14	"		7.9K

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Date 1995 Feb 11 Observers Km / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC30246	HD114330	13 04 46	-05 00 18	04 18 30		0 22 W			401
47	COMP							FeNe clear	20
48	COMP							"	20
49	HD129956	14 40 25	+01 08 22	04 31 39		0 52 E			860
50	COMP							"	20
51	BIAS (4)			04 50					—
52	COMP							"	20
53	HD100889	11 31 37	-09 14 57	05 01 55		2 42 W			600
54	COMP							"	20
55	COMP							"	"
56	HD114330	13 04 46	-05 00 18	05 20 24		1 24 W			420
57	"			05 29 39		1 33 W			400
58	COMP							"	20
59	BIAS (4)			5 38					—
60	COMP							"	20

Spectr. Temp.
Focus
Spectr Temp

Exp. Mtr	Seeing
NONE	4.0

Spectr. Temp. ..... Dome Temp./Hum. -8.1°C / 62.9% Transparency Conditions clear with haze down low.

Focus 7.12 N FAN ON 292

Spectr. Temp. ..... Dome Temp./Hum. -8.5°C / 59.8% @ cc 30253

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	~~P.H.~~	Program	Remarks	Quality
NONE	4"-5"	4.38	A1 IVs + Am	CASS CCD	600 l/mm (c) tilt = 24.8°	250μ	3760 Å	15	Km MK Stds	Telescope still on E side of piers	13.0K
								16			
								17			
		5.69	B9.5V					18	"		11.K
								~~19~~ 20			
								1/2			
								3			
	4"	4.70	B9.5Vn					9	"		9.1K
								10			
								13			
	4"	4.38	A1 IVs + Am					14	"	slightly saturated at red end (1st 42 rows)	16+ K
	4"-5"							15	"		13.0K
								16			
								1/2			
								21			

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Date 1995 Feb 11 Observers Km / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC30261	HD129956	14 40 25	+01 08 22	5 43 39		0 18 W			700
62	"			5 57 32		0 32 W			800
63	COMP							FeNe clear	20
64	COMP								
65	HD100889	11 31 37	-9 14 57	06 19 26		4 04 W			800
66	COMP								
67	BIAS(4)			6 36					—
CG407 44-47	HD144579	16 01 30	+39 25 36					4x	0.01s
48/49	"					12m E	85° Alt	2x	.133s
CC30268-76	FLAT x 9					2h 0m E	+39° 11'	Turq Clear	13s
77	SKY FLAT					"	"		180s
78	"					"	+39° ↔ +36°		150s
79	"					"	+ 37°		120s
80	BIAS(4)			7 20					

Spectr. Temp. ..... Dome Temp./Hum. -8.8°C/56.7% Transparency Conditions clear 294

Focus 7.12

Spectr. Temp. ..... Dome Temp./Hum. -9.8°C/55.2% @ end of SEEING TEST

Exp. Mtr.	Seeing	✓ ~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CX	~~P.H.~~ C.	Program	Remarks	Quality
NONE	4"	5.69	B9.5V	CASS CCD	600 l/mm (c) tilt = 24.8°	250μ	3760 Å	22	Km MK Stds	Telescope still on E side of piers	8.5K
								23	"		9.4K
								24			(11.4K)
								25			
	5"-7"	4.70	B9.5Vn					26	"	into the wind, lots of sky	20K
								27			
								1/2			
		6.66	G8V			above 250μ		—	SEEING TEST	~~above~~ Dome E, W wind mech. sun coming up.	
		"	"					—			
								28		CLOCK DRIVE OFF	12.7K → 11.8K
								28			7.-K
								28			10.9K
								28			12.1K
								1/2			

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Date 1995 Feb 11/12 Observers Km / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC 30281	BIAS(4)			19 59					
82	COMP							FeNe clear	20
83	HD 30739	4 45 10	+8 43 43	20 03 25		0 26 W			210
84	~~COMP~~ "			20 08 01		0 33 W			400
85	COMP							"	20
86	COMP							"	"
87	HD 74280	8 38 00	+03 45 28	20 23 56		3 03 E			426
88	COMP							"	20
CG40750-53	HD 40722	5 55 40	+43 22 39					4x	.007s
54/55	"					0 09m E	88° Alt	2x	.133s
89	BIAS(4)			20 53					–
90 - 98	FLAT x 9					1 20 W	+9°	Tung clear	5
99	BIAS (4)			21 02					
CC 30300	COMP							FeNe clear	20
01	HD 30739	4 45 10	+8 43 43	21 12 32		1 39 W			460
02	COMP							"	20

Spectr. Temp.
Focus
Spectr. Temp
Exp. Mtr Sec
NONE

Spectr. Temp. ..... Dome Temp./Hum. -14.8°C/46.8% Transparency Conditions partly cloudy, strong wind..

Focus .....7..19..... FANS OFF 296

Spectr. Temp. ..... Dome Temp./Hum. -15.9°C/48.5% @ seeing test

410 0 50 1024 4 1 CCDFMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ λ	~~P.H.~~ C'	Program	Remarks	Quality
NONE				CASS CCD	600 l/mm (C) tilt = 25.4°	250μ	4200Å	1/2			
								3			
	>6"	4.36	A1 Vn					4	Km MK Stds	335:1 S/N	5.2K
	6"	"	"					4		S/N ~ 465:1	10.1K
								5			
								6			
	6"	4.30	B3 V					7	"	thin cloud.	10.8K
								8			
		6.42	K0 III			above		–	SEEING TEST	Dome W, strong W wind, thin	
	5"	"	"			250μ		–	"	cloud,	
								1/2			
								2			14.2K → 13.6K
								1/2			
								9		FOCUS CHANGED TO 7.24	
	5"	4.36	A1 Vn					10	Km MK Stds	wind moving star off the slit. S/N ~ 400:1	12.2K
								11			

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Date 1995 Feb 11/12 Observers Km / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
30303	comp							FeNe clear	20
304	HD 74280	08 38 00	+03 45 28	21 29 13		-1 57 E			400
05	HD 74280			21 38 34		-1 49 E			320
06	comp							"	20
07	comp							"	20
08	HD 100889	11 31 36.5	-09 14 57	22 07 26		-4 05 E			775
09	comp							"	20
10	bias(4)			22 23					
11	comp							"	20
12	HD 100889	11 31 37	-09 14 57	22 26 47		-03 47 E			740
13	comp							"	20
14	comp							"	"
15	HD 30739	04 45 10	+08 43 43	22 50 22		3 21 W			615
16	COMP							"	20
17	COMP							"	"

Spectr. Temp. ~~-16.0°C/+50.1%~~ Dome Temp./Hum. -16.1°C/+50.1% Transparency Conditions cloudy 198

Focus ~~17.24~~

Spectr. Temp. ..... Dome Temp./Hum. .....

40 050 1024 41

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CCD	~~P.H.~~ C	Program	Remarks	Quality
NONE				CASS CCD	600 l/mm (c) tilt = 25.4°	250μ	4200 Å	12			
		4.30	B3V					13	Km MK Stds		15.5K
								14	"		9.7K
								15			
								16			
		4.70	B9.5Vn					17	"	cloudy	5.1K
								18			
								1/2			
								19			
		4.70	B9.5Vn					20	"	cloudy.	MAX 4.8K
								21			
								22			
		4.36	A1Vn					23	"	clouds all over 3.5K	~~MAX 3.5K~~
								24			
								25			

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Date 1995 Feb 11/12 Observers Km/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC 30318	HD 74280	8 38 00	+3 45 28	23 10 22		0 16 E			420
19	COMP							FeNe clear	20
20	BIAS(4)			23 21					–
21	COMP							"	20
22	HD100889	11 31 37	-9 14 57	23 32 54		2 34 E			1200
23	COMP							"	20
24	HD100889			23 58 49		2 08 E			1200
25	COMP							"	20
26	HD100889			00 26 18		1 54 E			400
27	COMP							"	20
28	BIAS(4)			00 34					–
29	COMP								
30	HD 114330	13 04 46	-05 00 18	00 40 07		-03 15 E			310
31	HD 114330			00 47 32		-03 05 E			450
32	COMP								20

Spectr. Temp.
Focus
Spectr. Temp
Exp. Mtr
Sec

Spectr. Temp. ..... Dome Temp./Hum. -16.4°C/53.6% Transparency Conditions . mostly cloudy .. WNW wind ..

Focus .....7.24..... 300

Spectr. Temp. ..... Dome Temp./Hum. -16.6°C / +54.3%

Exp. Mtr.	Seeing	~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ cλ	~~P.H.~~ C.	Program	Remarks	Quality
NONE		4.30	B3V	CASS CCD	600 ℓ/mm(c) tilt=25.4°	250μ	4200Å	26	Km MK Stds	cloud thinning/dispersing	7.3K
								27			
								1/2			
		4.70	B9.5Vn					28			
	<8">							29	"	really thick cloud here.	3.7K ~~[illegible]~~
								30			
	<6">							29	"	saturated first 246 rows in column 29. clouds thinned.	
								30			
	5"×4"							29	"	clear again.	11.0K
								30			
								1/2			
								3			
		4.38	A1IIs+Am					4			8.5K
								4			12.3K
								5			

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Date 1995 Feb 11/12 Observers Km/smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC 30333	COMP							FeNe clear	20
34	HD 129956	14 40 25	+01 08 22	01 02 50		-04 21 E			700
35	"	"	"	01 16 21		-04 04 E			900
36	COMP							"	20
37	~~COMP~~ bias (4)			1 38					—
38	COMP							"	20
39	HD 74280	8 38 00	+3 45 28	01 53 16		2 24 W			240
40	COMP							"	20
41	COMP							"	"
42	HD 100889	11 31 37	-9 14 57	02 04 49		0 16 E			330
43	COMP							"	20
44	COMP							"	"
45	HD 114330	13 04 46	-5 00 18	02 22 55		1 32 E			300
46	COMP							"	20
47	BIAS (4)			2 30					—

Spectr. Temp.
Focus
Spectr. Temp
Exp. Mtr Sec

Spectr. Temp. -10.2°C Dome Temp./Hum. -16.7°C / +54.4% Transparency Conditions clear 302

Focus 7.24

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
NONE								6			
		5.69	B9.5V					7	Km Mk Stds		5.0K
								10	"		7.3K
								8			
								1/2 9			
								9			
	4"	4.30	B3V					10	"	telescope being blown by wind - 1st attempt heavily saturated & deleted	12.1K
								11			
								12			
	3"-4"	4.70	B9.5Vn					13	"		10.3K
								15			
								16			
		4.38	A1IVs +Am					17	"		14.1K
								18			
								1/2			

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Date 1995 Feb 11/12 Observers Km/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc30348	COMP							FeNe clear	20
49	HD129956	14 40 25	+1 08 22	2 35 50		2 44 E			900
50	COMP							"	20
51	COMP							"	"
52	HD74280	8 38 00	+3 45 28	3 01 51		3 33 W			260
53	COMP							"	20
54	COMP							"	"
55	HD100889	11 31 37	-9 14 57	03 13 01		0 52 W			330
56	COMP							"	20
57	COMP							"	"
58	HD114330	13 04 46	-5 00 18	03 26 47		0 21 E			300
59	COMP							"	20
60	BIAS(4)			03 34					—
61	COMP							"	20
62	HD129956	14 40 25	+1 08 22	03 40 26		~~1~~ -1 38 E			800
63	COMP								

Spectr. Temp.
Focus
Spectr. Temp.

Spectr. Temp. -100°C Dome Temp./Hum. -16.5°C/55.1% Transparency Conditions clear with "haze" 304

Focus 7.24

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CCD	~~P.H.~~ CI	Program	Remarks	Quality
NONE				CASS CCD	600 ℓ/mm(c) tilt = 25.4°	250μ	4200Å	19			
	4"	5.69	B9.5V					20	Km MK Stds		10.3 K
								21			
								22			
	5"-6"	4.30	B3V					23	"		8.0K
								24			
								25			
	4"-5"	4.70	B9.5Vn					26	"	hazy	10.1K
								27			
								28			
		4.38	A1Vs + Am					29	"	trailed to prevent saturation - used 300 obs	8.8K
								30			
								1/2			
								6			
		5.69	B9.5V					7	"		9.5K
								8			

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Date 1995 Feb 11/12 Observers Km / smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
364	COMP							FeNe Clear	20
365	HD ~~74280~~ 100889	11 31 37	-09 14 57	04 07 51		01 49 W			330
366	"			04 15 31		02 01 W			700
367	COMP							"	20
368	COMP							"	"
369	HD 74280	08 37 60	+03 45 28	04 53 06		05 33 W			800
370	COMP							"	20
371	COMP							"	"
372	HD 114330	13 04 46	-05 00 18	05 17 31		1 24 W			300
373	COMP							"	20
374	BIAS (4)			05 24					—
CG40756-9	HD128178	14 33 24	+48 39						4x.067s
60/61	"				5 36	0 10 W	85° Alt	1.003 airmass	2x.127s
CC30375	COMP							FeNe Clear	20
76	HD129956	14 40 25	+01 08 22	5 45 12		0 26 W			900
77	COMP							"	20

Spectr. Temp.
Focus
Spectr. Temp.
Exp. Mtr
Sec

Spectr. Temp. ..... Dome Temp./Hum. -16.5°C / +58.2% Transparency Conditions clear, increasing cloud 300

Focus 7.24

Spectr. Temp. ..... Dome Temp./Hum. -17.2 / 63.1% @ seeing test FANS OFF

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ λ	P.H.	Program	Remarks	Quality
NONE				CASS CCD	600 l/mm(c) 25.4°	250μ	4200 Å	9			
		4.70	B9.5	Vn				10	Km MK Stds		4.4K
								13	"		8.7K
								11		TEL W SIDE	
								12		TEL E SIDE	
		4.30	B3V					13	"	Tel is in west side Too large airmass ~7	0.8K
								15			
								16			
		4.38	A1V + Am.					17	"		8.0K
								18			
								1/2			
		6.7	F2	LEV-CCD		above		—	SEEING TEST	Tel on E side! Dome NW,	
	5"-6"					250μ		—		med W wind, in cloud.	
				CASS CCD				19			
	7"	5.69	B9.5V					20	Km MK Stds	in a bit of cloud.	5.5K
								21			

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Date 1995 Feb 11/12 Observers Km/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC 30378	COMP							FeNe clear	20
79	HD 100889	11 31 37	-9 14 57	06 11 59		4 02 W			926
80	COMP							"	20
81	bias (4)			6 30					—
82	COMP							"	20
83	HD 114330	13 04 46	-05 00 18	6 36 00		2 44 W			400
84	COMP							"	20
85-93	FLAT x 9					2 48 W	-5° 30'	Tung clear	5

Spectr. Temp.
Focus
Spectr. Temp.
Exp Mtr
Seeing

Spectr. Temp. -100°C @ 6:30 Dome Temp./Hum. -16.2°C / 62.8% Transparency Conditions cloudy 308

Focus 7.24

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CΔ	~~P.H.~~ C1	Program	Remarks	Quality
NONE				CASS CCD	600 l/mm (c) 25.4°	250μ	4200Å	22		TEL STILL ON E SIDE	
	~8"	4.70	B9.5 V n					23	Km Mk Stds	wind making guiding difficult heavy cloud for some time and rack moved early	1.4K
								24			
								1/2			
								~~26~~ 25			
	~7"	4.38	A1 V s + Am					26	"	starting to get light. in cloud.	4.7K
								27			
								2			13.3K → 12.1K
			All to Perseus & WORM								

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Date 1995 Feb 12/13. Observers Km / Smt

Emulsion Batches: @ Hα { GG 385 FILTER IN STELLAR BEAM & FLATS; OG 560 FILTER IN COMP BEAM

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC 30394	BIAS(4)			20 51				OG 560 FILTER	–
95	COMP							FeAr clear	60
96	(Vys 428A) BD+16 502	3 38 12	+16 21 30	21 00 31		2 37 W			401
97	COMP							FeAr clear	60
98	COMP							"	"
99	(Vys 226) AC+53 2250-45	3 49 06	+53 16 23	21 23 51		2 50 W			600
CC 30400	COMP							"	60
401-09	FLAT x 9					2 31 W	+31°	Tung ¼ Ap	3
10	BIAS(4)			22 00				with GG 385 FILTER	
11	COMP							FeNe clear	20
12	HD87737	10 01 53	17 15 01	00 37 45		0 14 E			80
13	COMP							"	20
14	HD87737			00 42 08		0 10 E			85
15	COMP							"	20
16	BIAS(4)			00 46					

Spectr. Temp. -100°C Dome Temp./Hum. -11.3°C/65.2% Transparency Conditions. partly cloudy → overcast
DOME FANS ON

Focus 7.09 set for -14°C = TP, T1C = -13.5°C from cassetup

Spectr. Temp. Dome Temp./Hum.

375 0 50 1024 4 1 CCDFMT

NO FILTER Exp. Mtr.	Seeing	V ~~Pg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ Cλ	~~P.H.~~ C.	Program	Remarks	Quality
				CASS CCD	1200 l/mm 42.3 degrees	306μ	6563Å (Hα)	1/2			
								3			9.1K
285		10.3	MO					4	Km Vys Hα	CSS 386 clock 10 s ahead of WWV, in cloud S/N~40	150 above b/g
								5			
								6		CSS 386 clock reset to WWV before hand	
267		10.5	MO					7	"	lots of cloud.	
								8		SE DOME FAN NOW OFF.	
								2		clock drive off. overcast now. dome shut	12.8K → 12.2K
								1/2			
BG 39 FILTER				CASS CCD	600 l/mm (c) 24.6°	250μ	3800Å	3	410 0 50 1024 4 1 CCDFMT		
6700		3.52	A0Ib					4	Km MK Stds		14.7K
								5			
7000		"	"					6	"		14.0K
								8			
								1/2			

3½

Date 1995 Feb 12/13 Observers Km/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
30417	COMP							FeNe clear	20
418	HD100889	11 31 37	-09 14 57	00 53 56		-01 24 E			240
19	COMP							"	20
20	COMP							"	"
21	HD84025	10 11 08	+23 54 57	01 07 23		0 6 W			87
22	COMP							"	20
23-25	MOON "FLATS" x3	07 50	+15 18				3 03 W	NO FILTER	10s
26	COMP							FeNe clear	20
27	HD101501	11 35 47	+34 46	01 48 59		0 29 E			523
28	COMP							"	20
29	BIAS(4)			02 00					—
30	~~HD100~~ COMP							"	20
31	HD 100889	11 31 37	-9 14 57	02 06 52		0 10 E			330
32	COMP							"	20
33	COMP								
34	HD 103287	11 48 34	54 15 03	02 28 13		0 10 E			26

Spectr. Temp.
Focus
Spectr. Temp.

Exp. Mtr | Sec

Spectr. Temp. -10.1°C Dome Temp./Hum. -12.0°C / 70.7% Transparency Conditions clear, moon near full 312

Focus 7.09 @ MOON "FLATS" NE FAN ON ONLY

Spectr. Temp. Dome Temp./Hum. 410 0 50 1024 4 1 CCDFM

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG 39 FILTER				CASS CCD	600 l/mm 24.6°	250μ	3800Å	9			
4161		4.70	B9.5Vn					10	Km MK Stds		5.8K
								11			
								12			
7000		3.44	F0III					13	"		12.6K
								14			
—		C'MON	NOW.					16	FLUX CALIBRATION		11.4K → 9.8K
								17			
7000		5.33	G8V					18	Km MK Stds	some thin haze.	10.2K
								19			
								1/2			
								20			
6990	3"	4.70 ~~8~~	B9.5Vn					21	"		10.7K
								22			
								23			
~~7000~~ 6500		2.44	A0V					24	"	trailed a bit	10.5K

313

Date 1995 Feb 12/13 Observers Km / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC 30435	COMP							FeNe clear	20
36	COMP							"	"
37	HD109358	12 28 00	+41 54 03	02 38 04					200
38	COMP							"	20
39	BIAS(4)			02 44		~~0 18 E~~	~~87° Alt~~		
CG40762-65	HD108100	12 20 06	+43 25						
66/67	"	"	"		02 53	0 18 E	87° Alt	1.0017 airmass	
CC 30440	COMP							FeNe clear	20
41	HD153210	16 52 56	+9 31 49	03 09 21		4 30 E			240
42	COMP							"	20
43	COMP							"	20
44	HD 114330	13 04 46	-05 00 18	03 28 37		0 24 E			210
45	COMP							"	20
46	COMP							"	"
47	HD 113226	12 57 12	11 29 48	03 41 45		-0 05 E			60
48	COMP							"	20

CCD Spectr. Temp. ...-100°C..... Dome Temp./Hum. -12.0°C/70.2% Transparency Conditions clear, cloud increasing from south west.

Focus .....7.09.....

Spectr. Temp. ..... Dome Temp./Hum. -12.1°C/70.1% @ seeing test start N FAN ON ONLY

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CN	~~P.H.~~ Ci	Program	Remarks	Quality
BG 39 FILTER				CASS CCD	600 l/mm (c) 24.6°	250μ	3800Å	25			
								26			
1300		4.26	G0 V					27	Km MK Stds		12.8K
								28			
								1/2			
~200	2"!	7.14	F2			above		–	SEEING TEST	Dome W, med to strong W wind clouds coming from SW but really clear right now bright near full moon.	
"						250μ		–	"		
								28			
1500	4" but 2.6 airmass.	3.20	K2 III					29	Km MK Stds	hazy here, clouds approaching from the west	3.2K
								30			
								3			
6700		4.38	A0Vs + Am					4			13K
								5			
								~~6~~ 5			
7500		2.83	G8 III					6			10K
								8Ci			

315
p

Date 1995 Feb 12/13 Observers Km/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
30449	~~comp~~ bias (4)				03 46			FeNe clear	
30450	comp							↓	20
51	HD 121370	13 49 55	18 53 56	03 53 40		-0 45 E			37
52	comp							"	20
53	comp							"	"
54	HD 127665	14 27 31	30 48 37	04 03 02		-0 13 E			115
55	comp							"	20
56	comp							"	"
57	HD 120315	13 43 36	49 48 45	04 ~~18~~ 20 ~~39~~ 52		-0 12 E			8
58	comp							"	20
59	comp							"	"
60	HD 113139	12 56 26	56 54 19	04 30 23		0 49 W			300
61	comp							"	20
62	bias (4)			4 38					—
63	comp							"	20
64	HD 114330	13 04 46	-05 00 18	4 45 24		0 54 W			239

Spectr. Temp.
Focus
Spectr. Temp.

Spectr. Temp. ..... Dome Temp./Hum. 12.7°C/71.7% @ 4:30 Transparency Conditions Clear 316

Focus 7.09

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
86 39 FILTER								8/			
20		2.68	G0IV					9			
39 7400	✓							10	Km MK Stds		13.9K
20								11			
								12			
115 7700		3.58	K3III					13	"		9K
20								14			
								15			
8 6000		1.86	B3V					18	"		11.7K
20								19			
								20			
300 7000	3"	4.93	F2V					21	"		12.5K
20								22			
								1/2			
20								23			
300 7000		4.38	A1IV					24	"		12.3K

3/3

Date 1995 Feb 12/13 Observers Km/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC30465	COMP							Fe Ne clear	20
66	"							"	"
67	HD161797	17 42 33	+27 46 45	04 59 52		3 29 E			120
68	COMP							"	20
69	"							"	"
70	HD164058	17 54 17	+51 30 02	05 09 25		3 32 E			49
71	COMP							"	20
72	HD164058			05 13 26		3 27 E			120
73	COMP							"	20
74	"							"	"
75	HD172167	18 33 33	+38 41 26	05 26 42		3 56 E			5
76	COMP							"	20
77	BIAS(4)			5 30					—
78	COMP							"	20
79	HD185144	19 32 33	69 29 28	05 45 11		4 18 E			900

CCD Spectr. Temp. -101°C Dome Temp./Hum. -12.8°C/71.6% Transparency Conditions clear 318

Focus 7.09

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ cλ	~~P.H.~~ c1	Program	Remarks	Quality
B6 39 FILTER				CASS CCD	600 ℓ/mm (1) 24.6°	250μ	3800Å	25			
								25			
7000	2" ?	3.42	G5IV					26	Km MK Stds		11.0K
								28			
								"			
7000	3"	2.23	K5III					29	"	weak but late type.	3.3K
								30			
18 500	3"	2.23	K5III					29	"		10.5K
								30			
								3			
6500	artificial 8"-10"	0.03	A0V					4	"	made star image REALLY out of focus	11.6K
								5	"		
								1/2			
								5			
14 500	~5"	4.68	K0V					6	"	TURNED OFF NE FAN - seeing improved - Dome NNE	13.7K

3p8

Date 1995 Feb 12/13 Observers Km / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC30480	COMP							FeNe clear	20
81	"							"	"
82	HD114330	13 04 46	-5 00 18	06 10 00		2 19 W			268
83	COMP							"	20
84	BIAS(4)			6 24					—
85	COMP							"	20
86	HD 206 936	21 40 27	+58 19 17	06 26 46		5 50 E			686
87	COMP							"	20
88-96	FLAT x 9					0 30 E	+7°32	Tung clear	13
97	SKY "FLAT"					"	"	clouds	180
98	"					"	"	"	240
99	"			7 11 40		"	"	"	"
CC30500	BIAS (4)			7 19					

CCD ~~Spectr.~~ Temp. -100°C Dome Temp./Hum. -13.0°C/71.5% Transparency Conditions clear → cloudy 320

Focus 7.09 FANS OFF

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	V ~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	~~P.H.~~	Program	Remarks	Quality
BG 39 FILTER				CASS CCD	600 l/mm(c) 24.6°	250μ	3800 Å	8			
								9		BIG ~~[illegible]~~ DROP IN LOWER HALF (25-50 columns) INTENSITY FROM	
7000	3"-4"	4.38	A1 ~~IV~~ V s + Am					10	MK Std.		11.7K
								11			
								1/2			
								12			
16 000	5"	4.08	M2Ia					13	Km MK Stds		1.7K
								14			
								2		clock drive off	16K →15.1K
								16		clouds but sun up somewhere.	3.5K
								16			9.5K
								16			16K
								1/2			
			All to Perseus & WORM								

321 p1

Mon/Tues

Date 1995 Feb 13/14 Observers [Rm]/Tn/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC30501	BIAS(4)								—
02	COMP							FeAr clear	60
03	HD65583	7 54 18	+29 31	23 16 21		00 45W			
04	COMP							FeAr clear	60
05	"							"	"
06	HD44990	6 19 49	+7 08 25	23 35 35		2 31 W			530
07	COMP							"	60
08	Comp							"	60
09	HD 30282	4 41 05	+36 32 00	23 5549		4 43 W			1032
10	Comp							FeAr clear	60s
11	BIAS(4)								
12	Comp							FeAr clear	60s
13	HD 25361	03 5642	+58 23	00 2359		6 04W			1610
14	Comp							FeAr clear	60sec
15	Comp							"	✓

CCD
Spectr. Temp.
Focus 6.94
Spectr. Temp.

Exp. Mtr	Seeing
0.5sec FILTER	
≈2800	
5930	
3200	3"
4300	3"

CCD Spectr. Temp. -100°C Dome Temp./Hum. -9.2°C 60.5% H Transparency Conditions Clearing 322

Focus 6.94 no focus test possible 90 C gain as usual Gusty SW wind

Spectr. Temp. Dome Temp./Hum. -10.6°C 63.3% H

410 0 50 1024 4 1 CCDFMT

Exp. Mtr.	Seeing	✓ ~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CX	~~P.H.~~ Ci	Program	Remarks	Quality
OG 560 FILTER				CASS CCD	1800 ℓ/mm 54.9°	306μ	6392 Å	1/2		≈ MAX ADU	
								3			
≈2800		7.00	G8V					4	STD VEL.		5.3K
		~~7.00~~	~~G8V~~					5			
								6			
5930		B 6.5-8.0	F7Iab - K1Iab					7	Rm T Mon	≈ 350/1 S/N	12.1K
								8			
								9			
3200	3"	B 7.9-8.8	F6 - G1					10	Rm pgm	AW Per 250/1 S/N	6.4K
								11			
								1/2		CCDT = -101.7°C	
								12		Telescope East side	
4300	3"	7.30 - 8.07	F6Ib - G2Ib					13	Rm pgm	RX Cam	8.1K
								14			
								14		Telescope West Side	

323 #2

Mon / Tues

Date 1995 Feb 13/14 Observers [Rm] / Tn / Sut / {Vys} Tn / Sut / [Hlw]

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC30516	HD 90861	10 24 18	+29 05	01 02 38					502
17	Comp							FeAr clear	60s
CG407 68→71	HD 90861	10 24 18	+29 05					4x	67ms
CG40772/3	"	"	"			0 02 W	75° Alt	2x	133ms
CC30518-26	FLAT x9							Jung Ap V4	6
CC 30527	BIAS(4)								
28	Comp							FeNe clear	20s
29	BD-2 3000 (Vys 560)	09 48 10	-03 13 04	02 47 09		2 40 W			1679
30	Comp							FeNe clear	20s
31	BD-2 3000 (Vys 560)	09 48 10	-03 13 04	03 17 36		3 17 W			2084
32	Comp							FeNe clear	20s
33	BIAS(4)			3 54					
34	COMP							"	20
35	BD+01 2447 (Vys 127)	10 23 49	+01 21 36	3 58 36		3 08 W			1200
~~36~~	~~Comp~~							"	20

Spectr. Temp. ..... Dome Temp./Hum. -10.6°C .. 63.1% H Transparency Conditions .. thin cloud .. coming 324

Focus ... 6.94 ... / 7.00 for 5303A work

CCD Spectr. Temp. -102.0°C ..... Dome Temp./Hum. -12.8°C 67.5% H

medium gusty WSW wind

410 0 50 1024 4 1 CCD FMT

Exp. Mtr. CG 560	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ Dumbda	P.H.	Program	Remarks	Quality
FILTER 2100	3"	✓ 7.2	K2 III	CASS CCD	1800 l/m Ti H 5349	306μ	6392Å	15c.	Std Vel		
								16			
		✓ 7.2	K2 III		ABOVE	306μ	Slit	–	Seeing Test	, Dome SW, medium	
								–	" "	Strong SW wind	
								2			12.3K → 11.4K
NO FILTER				CASS CCD	1800 l/mm CASS CCD 47.9° tilt	306μ	5305Å	1/2		CCD FMT THE SAME	
								3			
1050	2"-3"	✓ 10.54	M0					4c;	Vgs - Hlu	Full moon ≈ 25° away S/N ~ 55:1 above blg	
								5c;			
1320	3"	✓ 10.54	M0					6	"		
								7			
								1/2a			
								8			
1135	3"	✓ 9.65	M2					9	Nancy Standard	S/N ~ 60:1 RV⊙ = +8.36	
								10			

375 ~~Sept~~ 3

Mon / Tues

Date 1995. Feb 13/14 ..... Observers [H.W./Vys]/Smt/TG....

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC 30537	Comp							FeNe clear	20s
38	(Vys 594) HD 95735	10 57 54	+36 38 00	04 29 30		2 56 ish W			6,99
39	Comp							FeNe Clear	20
40	BIAS(4)			4 43					
41	COMP							FeNe Clear	20
42	(Vys 148) AC+79 4347	13 54 15	+79 20 23	4 53 52		0 54 W			2193
43	Comp							FeNe clear	20
44	~~Comp~~ BIAS(4)			5 36					—
45	COMP							"	20
46	BD+81 465 (Vys 152)	14 10 24	+81 04 30	5 37 33		01 19 W			1932
47	Comp							FeNe Clear	20
48	Comp							"	"
49	(Vys 759) AC+53 2527-1	16 06 49	+53 12 11	6 32 54		0 10 E			471
50	COMP							FeNe Clear	20s
51-59	FLATS x 9					0 1 E	+53°	twilight	4
60	BIAS(4)			6 49					

Spectr. Temp. −100 °C ..... Dome Temp./Hum. −12.9°C 68.3% H Transparency Conditions .. Fine 326

Focus ... 7.00 .....

~~Spectr.~~ CCD Temp. −102.0 °C ..... Dome Temp./Hum. −13.0°C / 64.9% @ FLATS

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CHSSCCD	1800 l/mm TiH 47.9°	306	5305Å	11			
4500	2-3"	✓ 7.48	M2					12	Std Vel	(Marcy)	
								13			
								1/2			
								14			
910	2-3"	✓ 10.6	M0					15	{Vys} pgm	Encoders Δα = +00 19 sec Δδ = +00 42	
								16			
								1/2			
								17			
900	2-3"	✓ 10.4	M0					18	{Vys} pgm		
								19			
								20			
720 but mostly sky		✓ 10.19	M0					21	{Vys} pgm.	sky getting bright.	
								22			
								23			~11 K
								1/2		All to Perseus & WRKM	

3297 Tues/Wed

Date 1995 Feb 14/15 Observers [Blu.] Tn. / Smt.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC 30561	BIAS (4)								
62	Comp			1821				Fe Ar Clear	60s
63	HD24760	03 51.08	+39 43.16	18 38 40					55
64	Comp							Fe Ar Clear	60s
65	Comp							"	"
66	HD37017	05 30.25	-04 33.36	18 49 21		0 58 E			1641
67	Comp							Fe Ar Clear	60s
68	~~Comp~~ BIAS (4)			19 20				"	"
69	Comp							Fe Ar Clear	60s
70	ADS 4241 D	05 33.42	-02 39.12	19 24 51		0 29 E			1400
71	Comp							Fe Ar Clear	60s
72	"							"	"
73	HD 37017	05 30.25	-04 33.36	19 56 15		0 02 W			1209
74	Comp							Fe Ar Clear	60s
75	BIAS (4)			20 19					

CCD Spectr. Temp. −100°C ..... Dome Temp./Hum. −9.0°C 58.2% Transparency Conditions ... Slight haze ... 3.8

Focus ... 7.04 ..... 90C gain as usual FANS BOTH ON Some cloud DURING SETUP

CCD Spectr. Temp. −101.2°C ..... Dome Temp./Hum. −9.8°C 59.9%H 410 0 50 1024 41 CCDEMT MAX

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	~~P.H.~~	Program	Remarks	Quality
BG39 Filter				CASS CCD	1800l/mm Tilt 42.7°	306u	4475Å	1/2		S FAN TURNED OFF.	
								3			
≈10K	2"	B 2.6	B0.5V					4	Old program eps Per and was	260/1 S/N Encoder normalization star.	≈6.3K
								5			
								6			
6095	2"-3"	B 6.42	B2Vp					7	He Rich Bln	>200/1 S/N	3.0K
								8			
								1/2			
								9		≈200/1 S/N	
6300	3"	B 6.3	B2V					10	Bln dbl	(centred on 38/39 col (note Hecculiar) guided with AB off slit)	3.0K
								11			
								12			
6200	3"	B 6.42	B2Vp					13	He Rich Bln		
								14			
								1/2			

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Tues/Wed

Date 1995 Feb 14/15 Observers [Blu.] T.u./Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC 30576	Comp							FeAr clear	60s
77	ADS 4241 C	05 33 44	-02 39 28	20 23 18		00 36 W			1800
78	HD 37468 ~~Comp~~	05 33 44	-02 39 28	20 55 09		0 40 W			133
79	Comp							"	60
80	"							"	"
81	HD 37017	05 30 25	-4 33 36	21 04 21		1 10 W			1200
82	COMP							"	60
83	BIAS(4)			21 27					-
84	COMP							"	60
85	HD 21364	3 21 45	+9 23 03	21 35 12		3 34 W			300
86	COMP							"	60
87	"							"	"
88	HD 37017	05 30 25	-4 33 36	21 50 48		2 00 W			1471
89	Comp							FeAr clear	~~FeAr~~ ~~Cl~~
90	BIAS(4)			22 19					

~~Spectr.~~ CCD Temp. −100.2 °C Dome Temp./Hum. −9.9°C 59.7%H Transparency Conditions Only slight Haze 330

Focus 7.04

Spectr. Temp. ..... Dome Temp./Hum. ..... (winds SSW 4 kms/hr on Radio) ~~[illegible]~~

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	~~P.H.~~	Program	Remarks	Quality
				CASS CCD	1800 l/mm Tilt 427°	306μ	4475Å	15			
1170 (2'.3")		V 5.75		well separated FROM AB				16	Closest of companions	ADS 4241 C Bin (SW companion)	
10K		B 3.57	O9.5V					17	(ADS 4241 AB)	guided with AB mostly off slit.	5.0K
								18		guided at slit's centre ∴ D is on slit as well.	
								19			
7060		B 6.42	B2Vp					20	Bin He rich		3.9K
								21			
								1/2			
								22			
17K	4"	B 3.66	B8p					23	Bin Sp. Bin.		7.3K
								24			
								25			
6200	4"	B 6.42	B2Vp					26	Bin He rich		
60sec								27			
								1/2			

33 pg #3 Tues/Wed

Date 1995 Feb 14/15 Observers [Bln] Tn/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC30591	Comp							FeAr Clear	60s
92	HD 86360	09 52 51	12 55 19	22 24 04		1 59 E			806
93	Comp							FeAr Clear	60s
94	COMP							"	"
95	HD37017	5 30 25	-4 33 36	22 46 37		3 01 W			1700
96	COMP							"	60
97	HD37017			23 19 40		3 21 W			930
98	COMP							"	60
99	BIAS(4)			≈2346					
CC30600	Comp							FeAr Clear	60
01	HD112028	12 48 23	+83 57 24	23 50 00		3 25E			847
02	Comp							FeAr Clear	60
03									
11	FLATS x 9					0 18E	20°	TUNG Clear	15sec

CCD ~~Spectr~~. Temp. ...-100°C..... Dome Temp./Hum. -11.0°C/63.9% Transparency Conditions ...slightly hazy.... 332
full moon.

Focus .....7.04.....

Spectr. Temp. ..... Dome Temp./Hum. -11.5°C / 64.5% H
c lambda

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
					1800 l/mm	30μ	4475Å	3c;			
14050	3"	B 5.22	B9 IV					4c;	S β Bln	210° FROM moon Full moon NEARBY	7.0K
								5			
								6			
4900	4"-5"	B 6.42	B2 Ip					7	Bln He Rich	S/N ~ 175:1 ADD SECOND ONE TO THIS	1.9 K
								8			
2550	4"-5"							7	Bln He Rich	not much time left for this one. S/N ~ 115:1	1.1K
								8			
								1/2			
								9c;			
13,500	2"-3"	5.2	A0 shell					10c;	A0 shell	Bln	10K
	~~2"-4"~~	~~5.2~~	~~A0 shell~~					11c;			
								12			12.7K
									CONTINUED ON NEXT PAGE BUT CHANGE IN WAVELENGTH		

333 pg#4 Tues/Wed

Date 1995 Feb 14/15 Observers [H/w] {V.g.s} T.G. ISMT

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc 30612	Comp							FeNe Clear	20s
13	Brighter star to the SW of BD-02 3000	09 48 10	-03 13 04	00 38 30		0 40 W			1976
14	Comp							FeNe Clear	20s
15	BIAS (4)			1 19					
16	Comp							FeNe Clear	20
17	BD-02 3000	09 48 10	-3 13 04	01 23 44		1 25 W			1930
18	Comp							FeNe Clear	20
19	Comp							"	"
20	Vas 127 BD+01 2447	16 23 49	+1 21 36	020349		1 07 W			600
21	Comp							FeNe Clear	20s
22	BIAS (4)			2 16					—
23 → 31	~~Comp~~ FLATS x 9					0^m W, -25°	JUNG Ap = 1/2	~~FeNe~~ Clear	~~20s~~ 5s

Spectr. Temp. ..... Dome Temp./Hum. -11.9°C 66% Transparency Conditions ....slight haze....334.

Focus ....7.02.....

~~Spectr~~ CCD Temp. ....-10.8..... Dome Temp./Hum. -12.3°C/67.5% @ 1:50

Light SE wind now

410 050 1024 4 1 CCD FLAT

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no filter				CHSS CCD	1800 l/mm T.1447.9°	306μ	5303Å *	3		* actually < 5300 Å (missing 5400 Å line in FeNe)	
1700	3"	< 10.54	? MO					4	Vys pgm	real Vys 560 drowned out by moon ≈10° from full moon ∴ we thought this was it!	
								5			
								1/2			
								6			
1696	2"-3"	10.54	MO					7	Sp. Bin ? Hlw & Vys 560	very dim in moonlight <10° from full moon.	
								8			
								9			
825 mostly sky		9.65	m2					10	Std Vel (Marcy)	cloud & bright moon	
								11			
								1/2			
								14c		Cloud now	16.1K → 14.8K
									All to Perseus & WORM.		

335
pg#1 Thurs / Fri

Date 1995 Feb 16/17 Observers [Rm.] Sm.t. / Tm

Emulsion Batches:

CSS 386 = 6 secs ahead of W.W.V. Time ★

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC 30632	BIAS (4)								
33	Comp							Fe Ar Clear	60s
34	HD 214975	22 36 54	+56 19 00	19 45 21		7 13 W			2346
35	Comp							Fe Ar Clear	60s
36	BIAS (4)			20 27					
37	Comp							Fe Ar Clear	60s
38	HD 215159	22 38 15	+53 23 00	20 34 33		7 38 W			
39	Comp							Fe Ar Clear	60s
40	Comp							"	"
41	VY Per	02 20 19	+58 28 06	20 59 10		4 35 W			2040
42	Comp							Fe Ar Clear	60s
43	BIAS (4)			21 37					
44	COMP							"	60
45	HD 25361	3 56 41	+58 23 00	21 42 28		3 35 W			1677
46	Comp							Fe Ar Clear	60

CCD Spectr. Temp. −100°C Dome Temp./Hum. −2.7°C 64.5%H Transparency Conditions Clearing PARTIALLY 336

Focus 6.94

90C gain Spectr. Temp. Dome Temp./Hum. −4.2°C 67.0%H 410 0 50 1024 4 1 CCDFINT

CLAMBDA MAX ADU

Exp. Mtr.	Seeing	Pl. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
					1800 l/mm ** G=5930	306u	6466Å	1/2			
	~~4"~~			[Note Recent Grating Angle Repairs Resulted in a "G" value change]				3		Telescope East side	2.6K
no filter 2744	4"	8.40	G0Ib					4	Rm pgm Z Lac	>200/1 S/N	3.7K
								5			2.5K
								1/2			
G 560 FILTER NOW IN								6			
6500	3"-4"	6.19	K2					7	~~Std~~ vel comparison for previous star	[450/1 S/N]	9.0K
								8			
								9			
317	2"-3"	10.8 -11.66	F5 -F9					10	Rm pgm	* Cloud at end	400 above b/g
								11		CSS 386 Time correction del now	2.4K
								1/2			
								12			
3430	3"	7.30 -8.07	F6Ib -G2Ib					13	Rm RX Cam	thin patchy cloud here.	7.0K
								14			

337 pg 42

Thurs/Fri

Date 1995 Feb 16/17 Observers [Rm] Tn/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC30647	COMP							FeAr Clear	60
CC30648	HD ~~44990~~ 30282	4 41 05 ~~6 19 48~~	+36 32 36 ~~+7 08~~	22 21 48		3 15 W			673
49	Comp							FeAr Clear	60
50	BIAS(4)			22 42					
51	COMP							FeAr Clear	60
52	HD44990	6 19 48	+7 08	22 48 29		2 11 W			1055
53	COMP							FeAr clear	60
54	COMP							"	"
55	HD84441	9 40 11	24 14 05	23 16 30		0 58 E			95
56	COMP							FeAr Clear	60
57	COMP							"	"
58	HD 89449	10 14 18	+19 58 42	23 26 09		1 17 E			379
59	COMP							FeAr Clear	60
60	BIAS(4)			23 36					
61	Comp	for Ceres (next page)						FeAr Clear	60s

Spectr. Temp.
Focus 6.9
Spectr. Temp.

Exp. Mtr Sec

Spectr. Temp. ..... Dome Temp./Hum. -4.4°C 63%H Transparency Conditions .. Some Cloud ..... 338.

Focus ... 6.94 .....

Spectr. Temp. ..... Dome Temp./Hum. -5.2°C 67%H

increasing from SW

TEL E SIDE

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
OG 560 Filter				CASS CCD	1800 ln/mm G= 5930	306u	6400Å	15		≈ 100/1 S/N	
519	3"	B 7.9 -8.8	F6 - G1					16	Rm pgm AWPer	CSS 386 or CCD3 Crashed ~~during~~ reudant. Re-booted 386 after. Recovered image in same cache.	800 above blg
								17		much cloud.	2.4K
								1/2			
								18			
3716	4"	B 6.5-8.0	F7Iab - K1Iab					19	Rm T Mon	cloud	8.0K
								20			
								21			
6200		V 2.18	G1 II					22	Std. Velocity		12.6K
		~~2.18~~	~~G1 II~~					23			
								24			
5900	~4"	V 4.79	F6 V					25	Std. Vel		12.4K
								26			
								1/2			
								3			

pg #3 339

Date 1995 Feb 16/17 Observers [Rm] Tn / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC 30662	Ceres	09 09 48	2000 epoch x 31 08 10	23 44 25		0 30 W			1492
63	Comp							Fe Ar Clear	60s
64 — 72	FLAT x9					0 33 W	+31°	Tung ¼ Ap	7
73	COMP							FeNe clear	25
74	CERES	09 09 48	2000 31 08 10	00 28 44		1 04 W			901
75	COMP							FeNe clear	25
76	BIAS (4)			00 47					
77	Comp							FeNe Clear	25s
78	BD-02 3000	09 48 10	-03 13 04	00 57 22		1 04 W			1800
79	Comp							FeNe Clear	25s
80	BIAS (4)			01 37					
81	Comp							FeNe Clear	25s
82	HD 95735	10 57 54	+36 38 00	01 44 37		0 37 W			1528
83	Comp							FeNe Clear	25s
~~84~~	~~Comp~~	~~for HD 103095~~							

Spectr. Temp.
Focus 6.94
Spectr. Temp

Exp Mtr	Seeing
2827	4"
[redacted]	
06566 Filter Sat	
2190	4"
609	
1420	2.5"

Spectr. Temp. ..... Dome Temp./Hum. ~5.3°C 67.8% Transparency Conditions ..Part. Cloudy..... 340

Focus ....6.94..../6.97 for 5303Å Region

increasing cloud again

Spectr. Temp. ..... Dome Temp./Hum. .....

c Lambda

TEL E SIDE

Comparison Exp.	Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1992	2827	4"	~65	G2	CASS CCD	1800 ln/mm G=5930	306μ	6400Å	4	Std vel	use (asteroid)	5.5K
60s	~~[illegible]~~								5			
7									6			12.6→
25	OG560 Filter still in				CASS CCD	1800 ln/mm G=5140	306μ	5303Å	7			
901	2190	4"							8	Std Vel.	S/N ~ 200:1	1.2K
25									9			
25s									11			
1800	609		10.54	M0					12	Hlv Vgs	pgm	cloud ≥ 30° from FULL moon 300 above b/g
25s									13			
25s									14			
1530	1420	2-3"	7.48	M2					15	Std vel	(Marcy) cloudy	850
25s												

344 pg #4

Date 1995 Feb 16/17 Observers [H(w) Vgs] Tn / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
CG407 74/77	HD103095							4x	.067
CG407 78/79	"					00	+38°	2x	.133
CC30 84	Comp							FeNe clear	25
85	HD103095	11 47 13	+38 26 10	02 25 37		0021 W			108
86	Comp							FeNe clear	25s
87	BIAS (4)								—
88	Comp							FeNe clear	25s
89	HD123782	14 04 33	+49 55 50	02 50 53		1 40 E			388
90	Comp							FeNe clear	25s
691 – 699	FLAT x 9					1 30E	+50°	TUNG Ap=1/2	6s

CCD Spectr. Temp. −100.3°C Dome Temp./Hum. −5.6°C 69.4% H Transparency Conditions Cloudy & clear again Then cloudy again.

Focus 6.97

Spectr. Temp. Dome Temp./Hum. Centre λ N E Fun on All night.

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
~~NO FILT~~ OG 560 in	3"	6.45	G8V p	LCV CCD GUIDE CAMERA	ABOVE	306μ	Slit		Seeing Test	(Tel still East Side)	
									" "	no wind, Dome SE	
				CASS CCD	1800lm G-5140 Tilt 478°	306μ	5303Å	20			
5200	4"	6.45	G8V p					21	Std vel (IAU)		9K
								1/2			
								24			
2100	3-4"	5.25	M2 III ab					25	IAU std vel		2.5K
								26			
								27			16.1K

343 pg#2 Fri / Sat

Date 1995 Feb 17/18 ..... Observers [Bln]/[illegible]/t. student, Andy

Emulsion Batches:
NOTE: 2 SETS OF FLATS
CORRESPOND TO 2 SETTINGS

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc 30700	BIAS(4)			18 37					
701	Comp							FeAr Clear	60sec
702	HD37017	053025	-043336	184655		0 45E			1834
703	Comp							FeAr Clear	60sec
704	BIAS(4)								
705	Comp							FeAr Clear	60s
706	HD21364	032145	-092303	192830		W			249
707	Comp							FeAr Clear	60s
708	Comp							"	"
709	HD37017	053025	-043336	194201		00 02E			1100
710	Comp							FeAr Clear	60s
711	Comp							"	"
712	ADS 4241 C	053344	-023928	20:11:44		00:31 W			1530
* 713	~~Comp~~			20:01:45				FeAr Clear	60s
714	BIAS(4)			21:03:17					

CCD Spectr. Temp. ~100°C Dome Temp./Hum. ~00.4° 53%H Transparency Conditions Part. Cloudy To mostly cloudy 344

Focus 6.94

90C gain

Spectr. Temp. Dome Temp./Hum.

Lambda 410 0 50 1024 4 1 CCD Fmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG39 Filter				CASS CCD	1800 ln/mm G= 4575	30u	4475Å	1/2 ci			MAX ADU
				* Equivalent Region to OID G= 4558				5ci		Telescope East side	
6000	3"-6"	642	B2Vp					6ci	He Rich Bln	(Lots of cloud) Δt -00:00:15 Δs -00:01:48 ≈ 200/1 S/N	3.3K
								7ci			1.8K
								1/2			
								8			
70000	4"	366	B8p					9	Sp Bin Bln		
								10			
								11			
6200	2"-3"	642	B2Vp					12	He Rich Bln		4.4K
								13			
								14		The faint close companion guided with AB just off end of slit.	
715	2"	≈7		~60:1 SNR				15	Bln pgm		
				* Grating Single: Comparison Not Usable				16		Sp. Controller needed to be reset before Comp Clio taken	
								1/2		CCD Bin crashed as well	

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pg#2

Fri / Sat

Emulsion Batches:

Date 1995 Feb 17/18 Observers [Bln] Tu / III + (Andy DABYDEEN) 4th year student

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Seeing
cc 30 715	Comp									6639 Filter	
16	HD 37017	05 30 25	-4 33 36	21 09 38		01:34 W			1519	6304	2"
17	Comp			21:37 03				FeAr Clear	60s		
18	Comp							"	"		
19	AOS 4241 D	05 33 44	-02 39 28	21:47:21		02 03 W			1267	4750	2"
20	HD 37468	05 33 44	-02 39 28	22 09 04		02 06 W			140	7100	
21	Comp							FeAr Clear	60s		
22	BIAS (4)			22 13							
23	Comp							FeAr Clear	60s		
24	HD 37017	05 30 25	-4 33 36	22 19 20		02 45 W			1661	6000	3"
25	Comp							FeAr Clear	60s		
26	Comp							"	"		
27	AOS 4241 C	05 33 44	-02 39 28	22 53 02		03 18 W					3.5"
28	Comp							FeAr Clear	60s		
29	~~Comp~~ BIAS (4)			23 24				~~"~~	~~"~~		
30	Comp							FeAr Clear	60s		

CCD
Spectr. Temp.
Focus 694
Spectr. Temp.

CCD
Spectr. Temp. -101.2°c Dome Temp./Hum. -1.3°c 68.4% H Transparency Conditions OK 346

Focus 6.94 * Note Grating Angle slightly changed starting Exp # CC30713. It's an 8 pixel shift to Red

Spectr. Temp. Dome Temp./Hum. MAX

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG39 Filter				CASS CCD	1800 l/mm * G-4575	306u	* 4475A	17			
6309	2"	6.42	B2Vp					18	He-Rich Bln		
								19			
4750	2"	B 6.3	B2V					— 20	Bln dbl	Included ≈ AB just off edge of slit	
7100		B 3.57	09.5V					21	σ OR> AB		4.6K
								22			
								1/2			
								23c;			
5000	3"	6.42	B2Vp					24c;	He Rich Bln		
								25			
								26			
	3"5"	≈7						27	Bln pgm	NOT too well separated Bln Another Try with AB off end of slit	
								28			
								~~29~~ 1/2c;			
								29			

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Page #3

Fri / Sat

Date 1995 Feb 17/18 Observers [B.In] / III / Tn + Andy Dabydeen

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCD 30 731	HD 37017	5:30:25	-4:33 36	23:30:07		4:09 W			2443
32	Comp			0:12:00				Fe/Ar Clear	60s
33	Comp			0:17:58				"	"
34	HD 86360	09 52 54	+12 55	0:20:42		0:07 W			658
35	Comp			0:32:23				Fe/Ar Clear	60s
36	Bias (4)			0:33					
37	Comp			0 3845				Fe/Ar Clear	60s
38	HD37017	5 3025	-4 3336	0 4035		4:58 W			1220
39	Comp			1:02:46				Fe/Ar Clear	60s
40-48	FLAT x9	AT SECOND SETTING		1:11		~ 2:10W, -1°		TUNG AP = 1/2	17s
49	Comp							Fe/Ar Clear	60s
50	HD112028	12 4823	+83 5724	01 2801		1 28E			1082
51	Comp			01 4729				Fe/Ar Clear	60
52	Bias (4)			01 48					

CCD Spectr. Temp.
Focus
Spectr. Temp.

Exp. Mtr	Seeing
5237	4"
8133	4"
443	8"
6100	8-1

~~Spectr.~~ CCD Temp. ~10.2.0°C... Dome Temp./Hum. ~1.9° 73.9% Transparency Conditions ..hazy - cloudy 3.18

Focus .....6.94.....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
5237	4"	6.42	B2 Vp	Cass CCD	1800 l/mm G=4575	30μm	4475Å	5ci	He Rich Bln	~180:1 SNR	
								6ci			
								7ci			
8900	4.5"	5.22	B9 IV					8ci	Bln SB		5.2K
								9ci			
								1ci			
								10			
443	8"	6.42	B2 Vp					11	He Rich Bln (thin cloud too)		
								12			
				~~MTR~~				13			13.3 K
								15		Tel West Side now	
6100	(8"-15")	5.2	A0	shell				17	Bln Shell	Star	
								19			
								1			
								22			

349 pg #4

Date 1995 Feb 17/18 Observers [Bln] III / Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
80 CG40783	HD103095	11 52 43	1995.5 +37 45 04						
84 –85	"	"	"			00 12E			
CC30753	Comp							FeAr Clear	60s
54	HD103095	11 47 13	+38 26 10	02 09 23		00 26W			2142
55	Comp							FeAr Clear	60s
56	BTHS (4)								
CC30757 —765	FLATS x 9 With Same λ setting as at start of night, ie before slight accidental ~~change~~ shift of 8 pixels. At First Section								
						00 30W	+38°		17sec
66	Comp			(For purposes of verification against earlier position)				FeAr Clear	60s

Spectr. Temp. ..... Dome Temp./Hum. -1.6°C 67.8%H Transparency Conditions ....PART cloudy 380

Focus ....6.94.....

CCD Spectr. Temp. ...-100.5°C..... Dome Temp./Hum. -1.6°C 66.8%H completely cloudy again

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		6.45	G8V p	FEN CCD GUIDE CAMERA	Have	30u	slit		Seeing Test	Dome SW Medium SW wind	
				CASS CCD	1800 l/m G=4575		4475Å				
1300	2"-4"	6.45	G8V p					23c;	Stilbel	≈ 60/1 S/N	
								25			
								1/2c;			
This was Recovered to within 1 pixel of original Comp line positions											14K
								4			

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pg #1 SAT/Sun

Emulsion Batches: .....

Date 1995. Feb. 18/19..... Observers [B/n] Tests. T.n / [H/w] {Vys} Shelton checking for observing .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC 30767	BIAS(4)			18 55					
68	Comp			1901				FeNe Clear	90s
69	Comp							FeNe Clear	60s
CC307 70/72	TL841 x 3			1919 32		01 13W	−21 08		1000
CC307 73/75	TL830 x 3			20 23 33					1000
CC30776	BIAS(4)			21 26					
77/79	TL 850 x 3			21 26 28					900
80	Comp							FeNe Clear	60s
81 – 83	FLATS x 3							TUNG Ap 1/4	12s
	OBSERVING FOR [H/w] now								
CC 30784	BIAS(4)			22 32					
85	Comp							FeNe Clear	25s
86	HD62509	07 39 12	+28 16 04	22 40 38					3/s
87	Comp							FeNe Clear	25
88	Comp	for V1/S 560		next page				"	"

Spectr. Temp. ...
Focus 6.90
Spectr. Temp.

Exp. Mtr	Seeing

Spectr. Temp. -100°C Dome Temp./Hum. +2.0°C 64.5% H Transparency Conditions Mostly Cloudy 352

Focus 6.90 90 Cgain

Spectr. Temp. Dome Temp./Hum. C LAMBDA MAX ADU

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CASS CCD	1800 l/mm G=5323	306u	5568Å	1/2c			
					TILT = 49.7°		± .5 ε Row 512	~~4c~~		FOR FeAr map.	
								3c			
~~8,740~~	(One	Other then strong Blue end weak line noticed @ Row ± 3/6 ≈ 40 ADU above background.)						5c	Pair of Fluorescent lamps under end of Telescope Tube	(8K max for 600sec)	11.8K
								6c			10 K
								1/2			
								7c			11.4K
								8c			
								9c			12.8K
				CASS CCD	1800 l/mm G=5190	306u	5303Å	1/2c			
								3c		And was encoder norm STAR	10K
9K	1"-2"	✓ 1.14	K0III-5					4c	Bright Std vel	guided quickly	14K
								5			
								6			

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pg#2 Sat/Sun

Date 1995 Feb 18/19 .... Observers [Hlw] ... Tm .....

Emulsion Batches:
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Spectr. Temp.
Focus ... 6.96
CCD Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Seeing
CC30789	vvs 560 BD-02 3000	09 48 10	-03 13 04	22 51 14		00 46 E			2213	no filter 760	1.2"
90	Comp							FeNe Clear	25s		
91	BIAS(4)			23 30							
92	Comp							FeNe Clear	25s		
93	BD+01 2447	10 23 49	+01 21 36	23 35 26		00 51 E			1508	930	2"
94	Comp							FeNe Clear	25s		
95	Comp							"	25s		
96	HD95735	10 57 54	+36 38 00	00 06 21		00 59 E			1237	3320	3"
97	Comp							FeNe Clear	25s		
98	BIAS(4)										
99	Comp							FeNe Clear	25s		
CC30800	BD-02 3000	09 48 10	-03 13 04	00 35 04		00 47 W			1667	600	2"
01	Comp								25s		
02 – 810	FLATS x 9					00 55 W	-3 40	TMG Ap 1/2	5 sec		
811	BIAS(4)										

Spectr. Temp. ..... Dome Temp./Hum. +0.5°C ... 79.5%H Transparency Conditions ... Hazy 354

Focus ... 6.90 ..... Tel focus (Cass) 2756 Then cloud again

CCD Spectr. Temp. −100.2°C ... Dome Temp./Hum. 0.0°C ... 76.8%H (Airport Air Pres 102.21 kpa and SE Falling) @ 23 EST

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
no filter 760	1"-3"	10.54	M0	CASS CCD	1800 l/mm G=5140	306	5303Å	7ci	Vys 560	>50/1 S/N some cloud at end	
								8ci			
								1/2			
								10			
930	2"	9.65	M2					11	std vel	≈ 70/1 S/N Marcy some cloud	
								12			
								13			
3320	3"	7.48	M2					14	std vel	Marcy cloud	2.2K
								15			
								1/2			
								16			
600	2"	10.54	M0					17	Vys 560 again	50/1 S/N some cloud	
								18		max comp	10K
								19			14K
								1/2			
									All to Persons & Morgan		

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Emulsion Batches:

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Date ..... Observers .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp

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